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ABSTRACT

This training package, which is designed for use by tutors teaching basic skills in a variety of adult education settings throughout the United Kingdom, consists of four booklets. The first two booklets explain how to use Microsoft Works word processing and spreadsheet software. Each contains instructions for using the Microsoft products in MS DOS (versions 2 and 3) and Windows environments. The third booklet, which discusses using spreadsheets to develop numeracy skills, includes sections on setting up a spreadsheet and using basic spreadsheet skills to solve consumer credit problems, read charts, create charts and materials, and make decisions. Outlined in the fourth booklet, which deals with using word processing software to develop literacy skills, are techniques for introducing students to word processors, using word processors in group work, and planning lessons and developing instructional materials. The third and fourth booklets are divided into sections containing the following: aim, objectives, section outline, skills checklist, list of materials needed, procedure, evaluation activity/criteria, and learning activities. (MN)

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a training pack for tutors

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ALBSU
the Basic Skills Unit

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ALBSU (The Adult Literacy and Basic Skills Unit) is the national agency for adult literacy, numeracy and related basic skills in England and Wales. We are a Company Limited by Guarantee and a Registered Charity.

Although we are an independent organisation, ALBSU is grant aided by the Department for Education (DFE) and the Welsh Office Education Department (WOED).

Her Royal Highness, The Princess Royal is the Patron of ALBSU and our Chairman is Peter Davis, Deputy Chairman and Chief Executive of one of the world's largest publishing and communications groups, Reed Elsevier.

Our main programmes are:

- consultancy and advice
- sponsoring Development Projects
- publishing teaching material
- funding staff training
- giving grants to voluntary organisations for basic skills work
- commissioning research.

Between 1991-94 we are managing the *'Basic Skills at Work'* Programme which is funded by the Education and Employment Departments.

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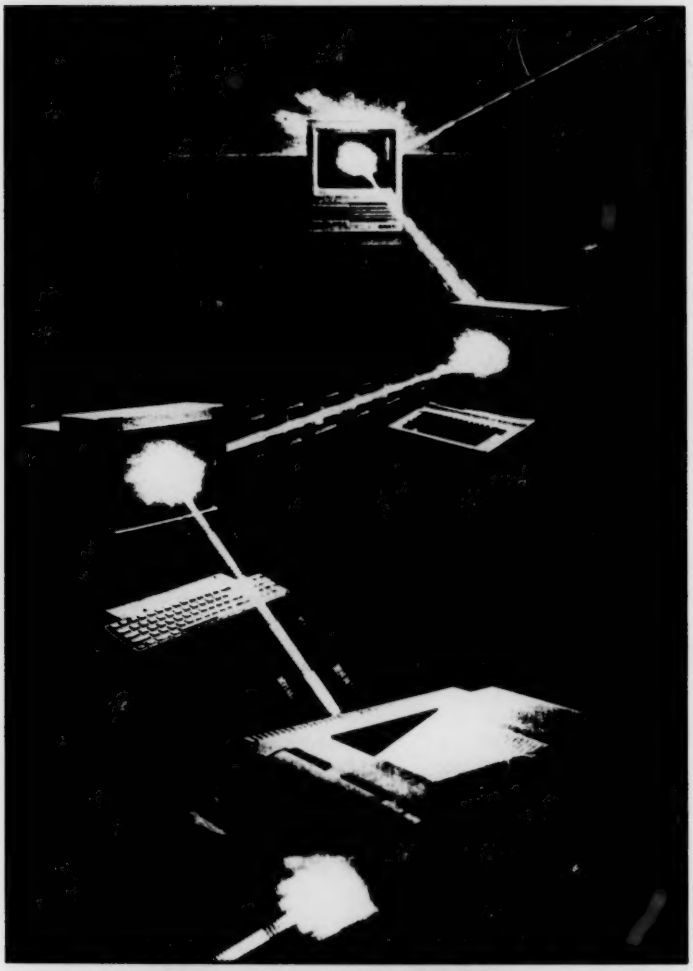
it & BASIC SKILLS

a training pack for tutors



MICROSOFT WORKS

WORDPROCESSOR INSTRUCTIONS

ALBSU

The Basic Skills Unit

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The first part of this booklet contains instructions for Microsoft Works versions 2 and 3 (MS DOS).

The second part contains instructions for Microsoft Works for Windows.

There is a separate contents list presented alphabetically at the start of each section.

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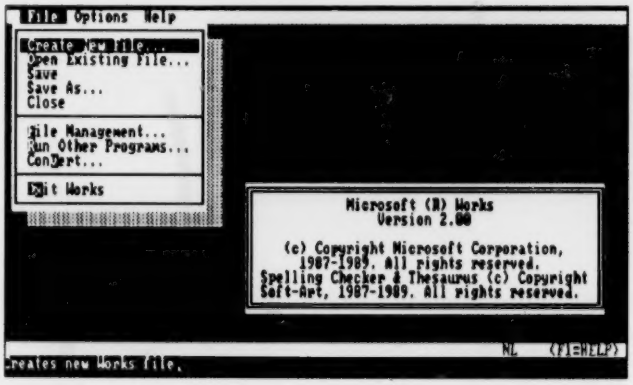
➤ To load the program

- type WORKS
- press <Enter>

or choose Works from the menu on your computer.



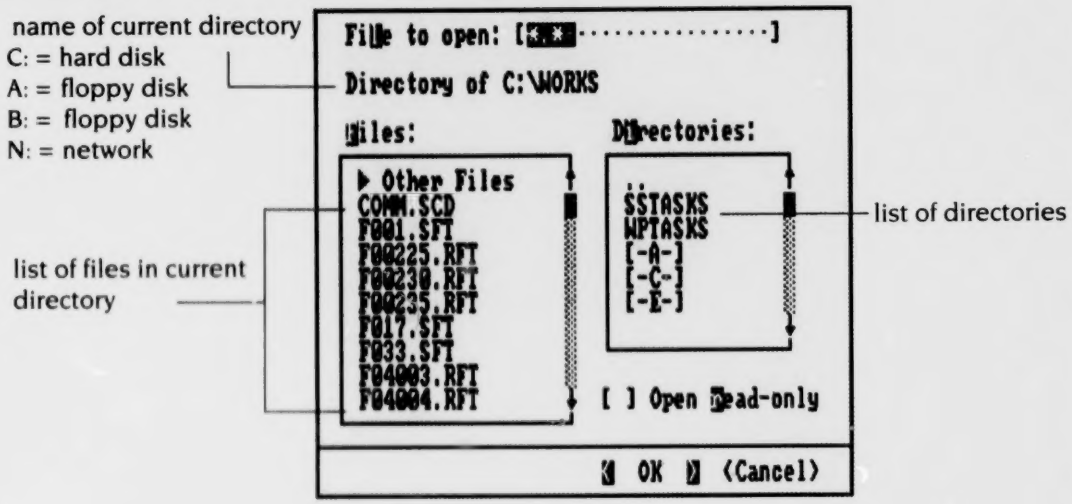
When you first load Works the command letters on the menu are already highlighted.

➤ To open an existing file

- press O (for **O**pen Existing File)
- read the notes on files and directories below and on Sheet 2, then see 'To open an existing file - summary'.

➤ Files and directories

Individual files are organised into directories in the same way as individual worksheets are organised in your filing cabinet. On Sheet 2 there is an example of a dialogue box, which appears when you choose *Open Existing File* from the File menu.



➤ To change directories

If the file you want is in a directory on the hard disk, the directory name will appear on the right of the dialogue box.

If the file you want is on a floppy disk choose [-A-] drive:

- move the cursor (see below) to highlight the directory or drive you want
- press <Enter>.

➤ Moving the cursor in a dialogue box

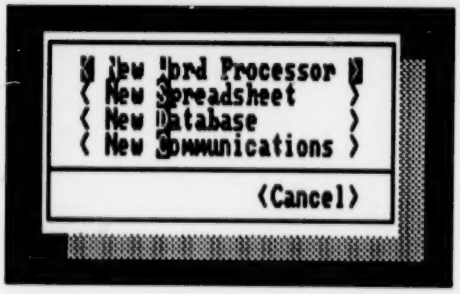
- use the tab key to move to different sections
- use the arrow keys to move the cursor inside sections
- the first press of the down arrow key highlights the first choice in the list.

➤ To open an existing file - summary

- press O (for **O**pen Existing File)
- if necessary, change directory or drive
- type in the name of the file or move the cursor to highlight the filename
- press <Enter>
- if the file is locked a screen message will appear telling you that the file is read-only; press <Enter> to open the file.

➤ To create a new file

- press N (for Create New file)
- the dialogue box (right) appears
- press W (for Wordprocessor)
- press <Enter> [Works3].



➤ To save a file

Save

- press Alt
- press F (for **F**ile)
- press S (for **S**ave).

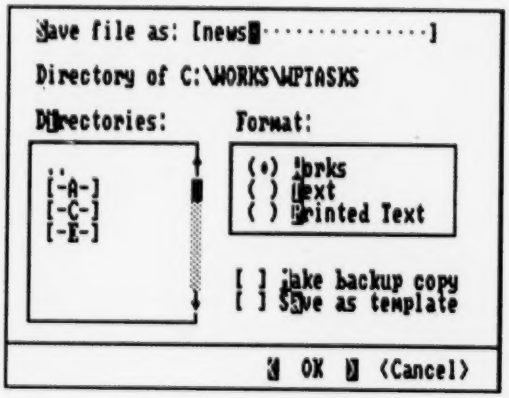
This will save your file with the same name. Unless the file is locked, (in which case you cannot *Save* but must use *Save As*) any changes you have made will be saved over the original text. If it is a new file, the procedure is the same as *Save As*.

Save As
to save a file with a different name from the original:

- press Alt
- press F (for **F**ile)
- press A (for Save **A**s).

a dialogue box appears:

- check that you are in the right directory
- type the new name (the cursor will be in the right place)
- press <Enter>.



➤ To close a file

- press Alt
- press F (for **F**ile)
- press C (for **C**lose)
- you may be asked if you want to save changes before closing
  if the file is locked (ie. an exercise loaded from disk) type N (for **N**o)
  if the file is one you have created type Y (for **Y**es).

Up to eight files can be open at a time, but they will be on top of each other on screen, and the available screen space gets smaller. It is better to close a file before opening a new one.

➤ To print a file

- press Alt
- press P (for **P**rint)
- press P (for **P**rint) again
- press <Enter>.

➤ To exit the program

- close all files
- press X (for E**x**it Works).

➤ Moving the cursor

Use the following keys to move the cursor. Where two keys are shown, hold down the Ctrl key and tap the second key.

←	left one character	Ctrl ↑	up one paragraph
→	right one character	Ctrl ↓	down one paragraph
↑	up one line	Home	to beginning of line
↓	down one line	End	to end of line
Ctrl ←	left one word	Ctrl Home	to beginning of document
Ctrl →	right one word	Ctrl End	to end of document

➤ Page Up/Page Down

- to move to the next screen press Pg Dn
- to move to previous screen press Pg Up.

➤ Using <Enter> to start a new line ↵

- press <Enter> when you want to start a new line
- When you type in text the wordprocessor will start a new line where necessary (this is called Wordwrap)
- Don't use <Enter> at the end of a line (unless you want to start a new paragraph)
- Each time you press <Enter> the cursor will move onto a new line. If your cursor is in the middle of a sentence, pressing <Enter> will split the sentence to two lines.

➤ Using the backspace delete key

This is the key above <Enter>. Pressing it deletes the letter, space or empty line immediately before the cursor. If the last action you took was to press <Enter>, pressing the backspace delete key undoes that action.

➤ Selecting text

If you want to make changes to a text, such as putting the paragraphs in a different order, you first need to **select** the text. When text is selected it is **highlighted** on screen.

➤ To select text

- put the cursor anywhere in the text you want to select
- press F8:
  once (EXT appears at the bottom of the screen)
  twice to select a word
  three times to select a sentence
  four times to select a paragraph
  five times to select the whole text.

When EXT shows at the bottom of the screen, you can extend the selection by using the left or right arrow keys.

➤ To deselect text

- press Esc to clear EXT
- press any arrow key.

➤ To delete text

- place the cursor after the letter you wish to delete
- press the backspace delete key (the key above <Enter>)

OR

- select the text you wish to delete and
- press the Del key.

➤ To move blocks of text

- select the text to be moved
- press F3 [Works2 - MOVE appears at the bottom of the screen]
  [Works3 - *Select new location and press Enter* appears at the bottom of the screen]
- move the cursor to the new location
- press <Enter>.

➤ Insert and Overtype

When you place the cursor in the middle of a sentence and type, the existing text moves over to make room. This is the normal mode for Works. The alternative mode is *Typing Replaces Selection* (see next section).
Works3 offers a further choice - Overtype Mode. In this mode anything you type replaces (and erases) existing text. Press the **Ins** key to move between overtype and insert modes.

➤ Typing Replaces Selection

This option enables you to type over text you have selected.

- press Alt
- press O (for **O**ptions)
- press Y (for **T**yping Replaces Selection) a bullet appears next to *Typing Replaces Selection* on the menu to show that the option is turned on
- select the text you want to replace eg. asterisks in a gap-fill
- type the new text.

Beware - when typing replaces selection the original is lost. If text is accidentally erased use Undo :

- press Alt
- press E (for **E**dit)
- press U (for **U**ndo) This will 'undo' the last action you took.

➤ To turn off *Typing Replaces Selection*

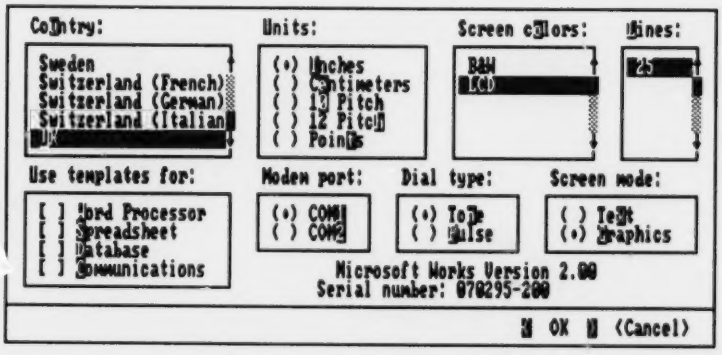
- press Alt
- press O (for **O**ptions)
- press Y (for **T**yping Replaces Selection) the bullet disappears.

➤ Character formatting

Formatting a character means changing letters to **bold** type, *italics*, <u>underline</u> and so on. These changes appear on screen when Works is in Graphics Mode. The usual mode is Text Mode, so to see the character formatting on screen you need to change to Graphics Mode.

➤ To change to Graphics Mode

- press Alt
- press (O for **O**ptions)
- press <Enter>
- the Works settings dialogue box appears:



- move the cursor to Screen mode: Graphics
- press <Enter>

If you have a colour monitor the screen may now appear in black and white.

➤ To change back to Text Mode

- choose Screen mode: Text
- reset the colour from the works settings.

➤ To format characters

- Select the text
- press Alt
- press T (for Format).

Choose the option you require from the following:

- press B for **Bold**
- press I for *Italics*
- press U for <u>Underline</u>
- press N for Normal

OR hold down the Ctrl key and press B for Bold, I for Italic, U for Underline, N for Normal.

➤ Paragraph formatting

Paragraph formatting means changing the layout of a paragraph, which could be a single line such as a heading or longer text. Changes to a paragraph appear on screen.

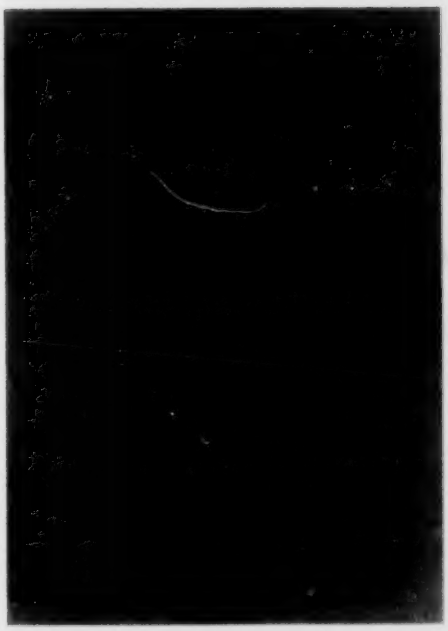
➤ To format a paragraph

- select the text
- press Alt
- press T (for Format).

Choose the option you require from the following:

- press L for Left
- press R for Right
- press C for Centre
- press J for Justify

OR hold down the Ctrl key and press L for Left, R for Right, C for Centre, J for Justify.



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➤ Merging files

If you wish to bring together different pieces of text such as articles for a newsletter, you will need to merge two or more separate files to make one file.

- open the first file
- open the second file (without closing the first one)
- select all the text in the second file:
  - press Alt
  - press S (for **S**elect)
  - press A (for **A**ll)

The text will now be highlighted.

- copy the text
  - press Alt
  - press E (for **E**dit)
  - press C (for **C**opy)

[Works2 - COPY appears at the bottom of the screen]
[Works3 - *Select new location* appears at the bottom of the screen]

- change active file
  - press Alt
  - press W (for **W**indow)
  - press 1 (to make file one active)

- paste the text
  - move the cursor to the end of the text in file one
  - press <Enter>

You can continue to add as many files as you wish to make one complete file, but remember to save the new file with a different name.

➤ Locking Files

You need to lock files which students are going to use, so that the original version will not be lost by the student making changes and saving with the same filename.

You will need to unlock a locked file if you want to make changes to it.

Files are locked through operating system commands. You can give these commands from within the Works program. The file you want to lock or unlock should be closed, but you should be in the directory where the file is saved.

➤ To lock a file

From the File menu:

- press R (for **R**un Other Programs)
- press Tab to move the cursor to the command line
- type:

  attrib +r name.wps <Enter>

Where name is the name of the file you want to lock. You must include the file extension .wps (this indicates that it is a Works wordprocessing file).

➤ To lock several files

at the command line type:

attrib +r *.wps <Enter>

This will lock all the files with the extension .wps
(all the Works wordprocessing files in the directory).

➤ To unlock a file

at the command line type:

attrib -r name.wps <Enter>

➤ Troubleshooting

Problem	Possible action
Something happens on screen which you do not intend or expect	Choose Undo from the Edit menu, but note that this only 'undoes' the most recent action
If some of the text goes beyond the right hand side of the screen	Select Wrap for Screen on the Options menu
Cannot find file	Check directory and drives (Instruction sheets 1, 2)
Parts of text accidentally deleted	Check that Typing Replaces Selection or Overtype [Works3] is off (Instruction sheet 7)
Italics, bold and underline do not show on screen, or show in colour	Change to Graphics Mode (Instruction sheet 8)
Everything seems slow	Change to Text Mode (Instruction sheet 8); this can also be caused by your hard disk getting full
White boxes with no text appear on screen when you change to Graphics Mode	Switch off and start again - your hardware cannot cope with this function (186 only)
Screen messages which you do not understand	See section on messages in the Microsoft Works manual
Cannot save file	The file is locked, file must be saved with a different name (Instruction sheet 3)

➤ Works 3

The illustrations in this booklet are for Microsoft Works version 2. If you have version 3 the screen will appear slightly different. There are only minor differences in the instructions and these are indicated where necessary.

➤ Toolbar

Version 3 has a toolbar shown below the ruler. This is a short cut to certain functions using the mouse. It is suggested that this is not used or displayed on screen initially, unless you are already competent in the use of a mouse.

➤ To hide the toolbar

- press Alt
- press O (for **O**ptions)
- press H (for **S**how)

If the toolbar is on, there will be a cross in the box next to Show Toolbar

- press B (for Show Tool**b**ar) - the cross will disappear
- press <Enter>.

Note: this command has a toggle effect - from the Show menu, pressing B will alternate between show and hide the toolbar.

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Microsoft Works for Windows can be operated by the mouse or keyboard. The instructions in this booklet are written for the keyboard, with a few exceptions. If you are not familiar with using the mouse, read the notes below.

➤ Using the mouse

The mouse must be used on a flat clean surface. Put the heel of your hand on the table, and let the palm of your hand close over the mouse so that your fingers rest naturally on the mouse buttons. The mouse controls the pointer on screen. Move the pointer on to the chosen icon or menu item, and use one of the following:

click
press the left mouse button once and release it immediately

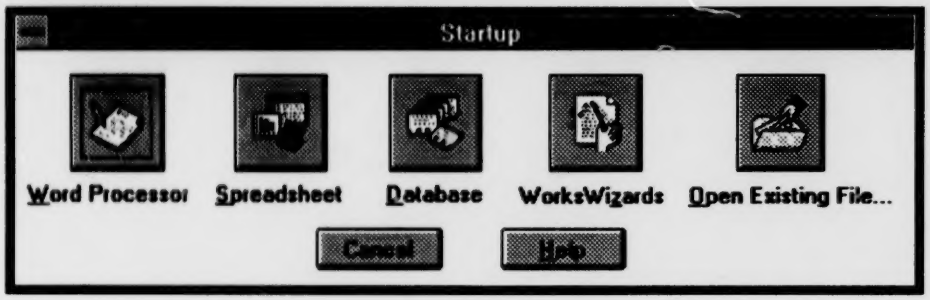
double-click
press the left mouse button twice in quick succession.

➤ Using the mouse with the instructions

To use the instructions in this booklet with a mouse ignore the Alt key press (which highlights the menu bar), move the pointer on to the menu item given in the keyboard instructions and click the left mouse button.

➤ To load the program

- double click on the Microsoft Works for Windows icon (this may be labelled MSWorks)
- or choose Works from the menu on your computer
- you will see the Startup box shown below:



➤ To open an existing file

(a) when you first load Microsoft Works:

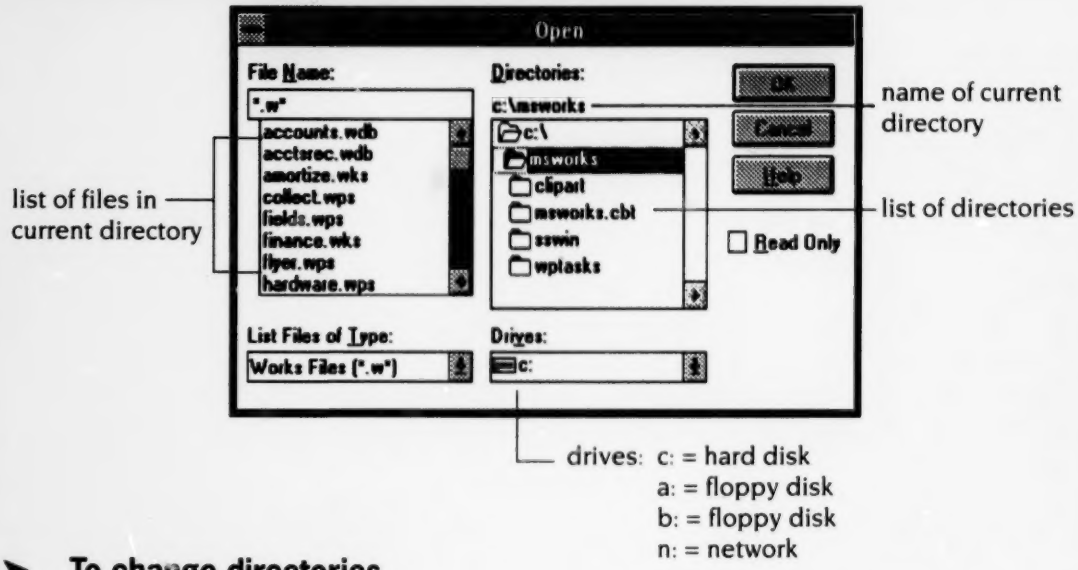
- press O (for Open existing file)
- read the notes on files and directories below, and on Sheet 2, then see 'To open an existing file - summary'.

(b) when the wordprocessing program is already running:

- press Alt
- press F (for File)
- press O (for Open Existing File)
- read the notes on files and directories below, and on Sheet 2, then see 'To open an existing file - summary'.

➤ Files and directories

Individual files are organised into directories in the same way as individual worksheets are organised in your filing cabinet. On Sheet 2 there is an example of a dialogue box, which appears when you choose *Open Existing File*.



➤ To change directories

If the file you want is in a directory on the hard disk, the directory name will appear in the directory list on the right of the dialogue box.

If the file you want is on a floppy disk choose drive a: from the drive box

- move the cursor (see below) to highlight the directory or drive you want
- press <Enter>.

➤ Moving the cursor in a dialogue box

- use the TAB key to move to different sections
- use the arrow keys to move the cursor inside sections.

➤ To open an existing file - summary

- press Alt (ignore this when you first load the program)
- press F (for File) (ignore this when you first load the program)
- press O (for Open Existing File)
- if necessary, change directory or drive
- type in the name of the file, or move the cursor to highlight the filename (see above) - if the file is on floppy disk, type a: first, eg: a:poem
- press <Enter>
- if the file is locked a message will appear telling you that the file is read-only; press <Enter> to open the file.

➤ To create a new file

(a) when you first load Microsoft Works:

- press W (for Wordprocessor).

(b) when the wordprocessing program is already running:

- press Alt
- press F (for File)
- press N (for Create New file)
- press W (for Wordprocessor).

➤ To save a file

Save

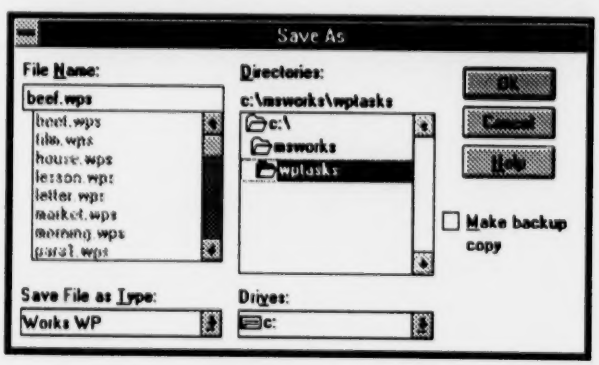
- press Alt
- press F (for File)
- press S (for Save).

This will save your file with the same name. Unless the file is locked, (in which case you cannot *Save* but must use *Save As*) any changes you have made will be saved over the original text. If it is a new file, the procedure is the same as *Save As*.

Save As
to save a file with a different name from the original:

- press Alt
- press F (for File)
- press A (for Save As)

a dialogue box (right) appears



- check that you are in the right directory
- type the new name (the cursor will be in the right place)
- press <Enter>

➤ To close a file

- press Alt
- press F (for File)
- press C (for Close)
- you may be asked if you want to save changes before closing:

if the file is locked (ie. an exercise loaded from disk) type N (for **N**o)

if the file is one you have created type Y (for **Y**es).

➤ To print a file

- press Alt
- press F (for File)
- press P (for Print)
- press <Enter>.

➤ To exit the program

- close all files
- press Alt
- press F (for File)
- press X (for Exit Works).

➤ Moving the cursor

Use the following keys to move the cursor. Where two keys are shown, hold down the Ctrl key and tap the second key.

←	left one character	Ctrl ↑	up one paragraph
→	right one character	Ctrl ↓	down one paragraph
↑	up one line	Home	to beginning of line
↓	down one line	End	to end of line
Ctrl ←	left one word	Ctrl Home	to beginning of document
Ctrl →	right one word	Ctrl End	to end of document

➤ Page Up/Page Down

- to move to the next screen press Pg Dn
- to move to previous screen press Pg Up.

➤ Using <Enter> to start a new line ↵

- press <Enter> when you want to start a new line
- When you type in text the wordprocessor will start a new line where necessary (this is called Wordwrap)
- Don't use <Enter> at the end of a line (unless you want to start a new paragraph)
- Each time you press <Enter> the cursor will move onto a new line. If your cursor is in the middle of a sentence, pressing <Enter> will split the sentence to two lines.

➤ Using the backspace delete key

This is the key above <Enter>. Pressing it deletes the letter, space or empty line immediately before the cursor. If the last action you took was to press <Enter>, pressing the backspace delete key undoes that action.

➤ Selecting text

If you want to make changes to a text, such as putting the paragraphs in a different order, you first need to **select** the text. When text is selected it is **highlighted** on screen.

➤ To select text

- put the cursor anywhere in the text you want to select
- press F8:
  once (EXT appears at the bottom of the screen)
  twice to select a word
  three times to select a sentence
  four times to select a paragraph
  five times to select the whole text.

When EXT shows at the bottom of the screen, you can extend the selection by using the left or right arrow keys.

➤ To deselect text

- press Esc to clear EXT
- press any arrow key.

➤ To delete text

- place the cursor after the letter you wish to delete
- press the backspace delete key (the key above <Enter>)

OR

- select the text you wish to delete
- press the Del key.

➤ To move blocks of text

- select the text to be moved
- press Alt
- press E (for Edit)
- press T (for Cut)
- move the cursor to the new location
- press Alt
- press E (for Edit)
- press P (for Paste).

➤ Insert and Overtype

When you place the cursor in the middle of a sentence and type, the existing text moves over to make room. This is the normal mode for Works. Alternative modes are *Typing Replaces Selection* (see next section) and *Overtype*.
In *Overtype* mode anything you type replaces (and erases) existing text. Press the **Ins** key to move between overtype and insert modes.

➤ Typing Replaces Selection

This option enables you to type over text you have selected.

- press Alt
- press O (for Options)
- press Y (for Typing Replaces Selection); a tick appears next to *Typing Replaces Selection* on the menu to show that the option is turned on
- select the text you want to replace, eg. asterisks in a gap-fill
- type the new text.

Beware - when typing replaces selection the original is lost. If text is accidentally erased use *Undo* :

- press Alt
- press E (for Edit)
- press U (for Undo) This will 'undo' the last action you took.

➤ To turn off *Typing Replaces Selection*

- press Alt
- press O (for Options)
- press Y (for Typing Replaces Selection) the tick disappears.

➤ Character formatting

Formatting a character means changing letters to **bold** type, *italics*, underline and so on. These changes appear on screen.

➤ To format characters

- select the text
- press Alt
- press T (for Format)
- press F (for Font and Style)
- hold down Alt and press the letter of the option you want (eg. B for Bold) - a cross appears in the box next to the option - press the letter again if you want to remove the formatting
- press <Enter>

OR select text, hold down the Ctrl key and press B for Bold, I for Italic, or U for Underline. Repeat the keystrokes to remove formatting.

OR select the text and use the mouse to move the pointer to the appropriate button on the button bar at the top of the screen (B for Bold, I for Italic or U for underline) and click the left mouse button. Click again to remove formatting.

➤ Paragraph formatting

Paragraph formatting means changing the layout of a paragraph, which could be a single line such as a heading, or longer text. Changes to a paragraph appear on screen.

➤ To format a paragraph

- put the cursor in the paragraph
- press Alt
- press T (for Format)
- press A (for Indents and Spacing)
- hold down Alt and press the letter of the format you want (eg. R for Right) - the circle next to the format is highlighted
- press <Enter>

OR put the cursor in the paragraph, hold down the Ctrl key and press L for Left, R for Right, E for Centre, J for Justify

OR put the cursor in the paragraph, use the mouse to move the pointer to the appropriate button on the button bar at the top of the screen (L for Left, R for Right, C for Centre, J for Justify) and click the left mouse button.

Note: to make changes to more than one paragraph, first select the text.

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➤ Merging files

If you wish to bring together different pieces of text such as articles for a newsletter, you will need to merge two or more separate files to make one file.

- open the first file
- open the second file (without closing the first one)
- select all the text in the second file:
  - press Alt
  - press S (for Select)
  - press A (for All).

The text will now be highlighted.

- copy the text
  - press Alt
  - press E (for Edit)
  - press C (for Copy)

- change active file
  - press Alt
  - press W (for Window)
  - press 1 (to make file one active)

- paste the text
  - move the cursor to the end of the text in file one
  - press Alt
  - press E (for Edit)
  - press P (for Paste)

You can continue to add as many files as you wish to make one complete file, but remember to save the new file with a different name.

➤ Locking Files

You need to lock files which students are going to use, so that the original version will not be lost by the student making changes and saving with the same filename. To *write-protect* or to make a file *read-only* are other ways of saying this.

You will need to unlock a locked file if you want to make changes to it.

Files can be locked through the Windows File Manager. The file you want to lock or unlock should be closed.

➤ To lock a file

You should seek help with this if you are not familiar with Windows.

- return to the Windows Program Manager
- open File Manager
- open the directory containing the files you wish to lock
- select the name(s) of the file(s) you wish to lock
- choose Properties from the File menu
- click on the box next to Read Only - a cross will appear to show that the file is now locked.

➤ Troubleshooting

Problem	Possible action
The text window does not fill the screen and you can see other windows behind it	Use the mouse to move the pointer to the top righthand corner of the window and click on the up arrow - this will maximise the window
Something happens on screen which you do not intend or expect	Choose Undo from the Edit menu, but note that this only 'undoes' the most recent action
If some of the text goes beyond the right hand side of the screen	Select Wrap for Window on the Options menu
Cannot find file	Check directory and drives (Instruction sheets 1, 2)
Parts of text accidentally deleted	Check that Typing Replaces Selection or Overtype is off (Instruction sheet 7)
Screen messages which you do not understand	See section on messages in the Microsoft Works manual
Cannot save file	The file is locked, file must be saved with a different name (Instruction sheet 3)

Further copies are available from:

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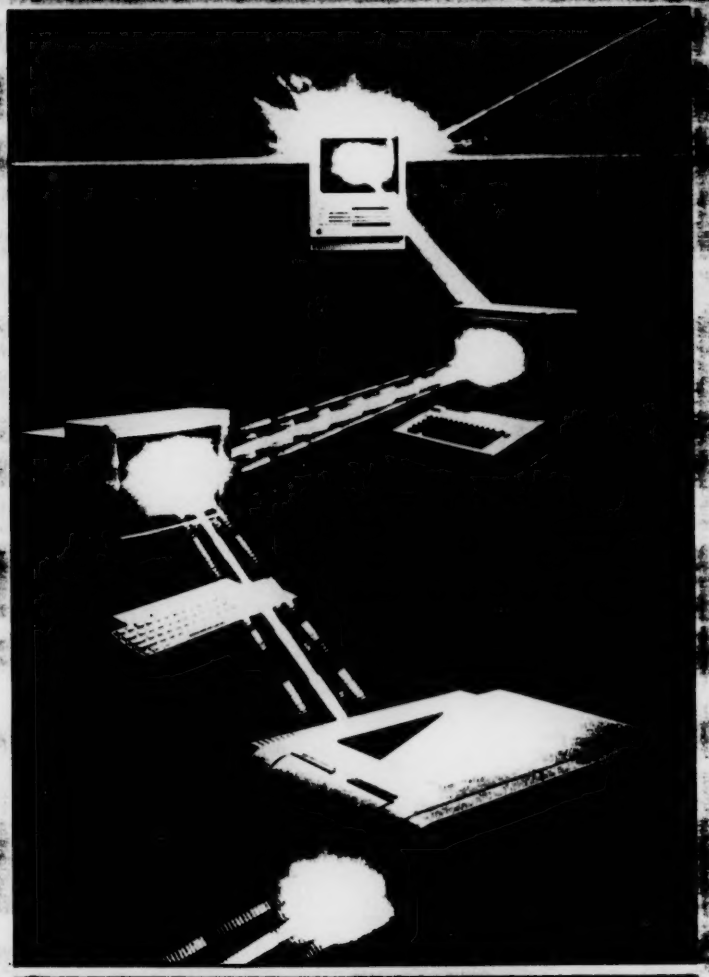

MICROSOFT WORKS

SPREADSHEET INSTRUCTIONS

ALBSU

The Basic Skills Unit

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The first part of this booklet contains instructions for Microsoft Works versions 2 and 3 (MS DOS).

The second part contains instructions for Microsoft Works for Windows.

There is a separate contents list presented alphabetically at the start of each section.

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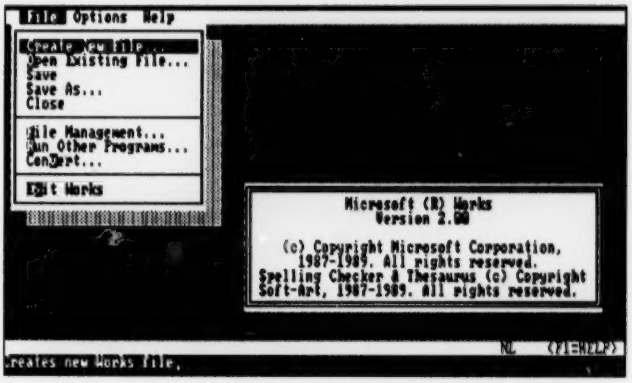
➤ To load the program

- type WORKS
- press <Enter>

or choose Works from the menu on your computer.



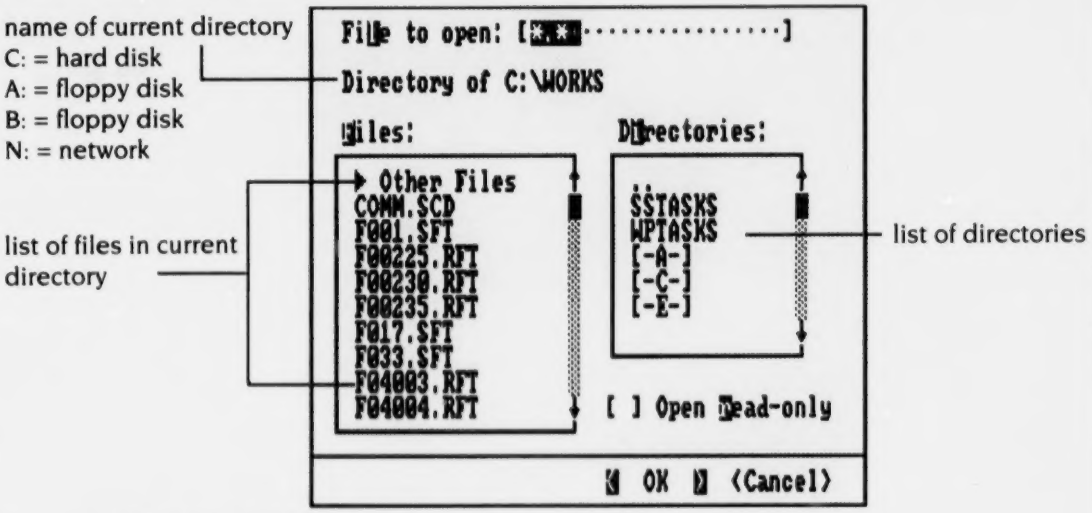
When you first load Works the command letters on the menu are already highlighted.

➤ To open an existing file

- press O (for **O**pen Existing File)
- read the notes on files and directories below, and on Sheet 2, then see 'To open an existing file - summary'.

➤ Files and directories

Individual files are organised into directories in the same way as individual worksheets are organised in your filing cabinet. On Sheet 2 there is an example of a dialogue box, which appears when you choose *Open Existing File* from the File menu.



➤ To change directories

If the file you want is in a directory on the hard disk, the directory name will appear on the right of the dialogue box.
If the file you want is on a floppy disk choose [-A-] drive

- move the cursor (see below) to highlight the directory or drive you want
- press <Enter>

➤ Moving the cursor in a dialogue box

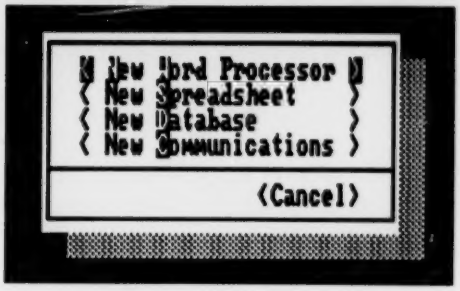
- use the tab key to move to different sections
- use the arrow keys to move the cursor inside sections
- the first press of the down arrow key will highlight the first choice in the list.

➤ To open an existing file - summary

- press O (for **O**pen Existing File)
- if necessary, change directory or drive
- type in the name of the file, or move the cursor to highlight the filename (see above)
- press <Enter>
- if the file is locked a message will appear telling you that the file is read-only; press <Enter> to open the file.

➤ To create a new file

- press N (for Create New file)
- the dialogue box (right) appears
- press S (for **S**preadsheet)
- press <Enter> (Works3).



➤ To save a file

Save

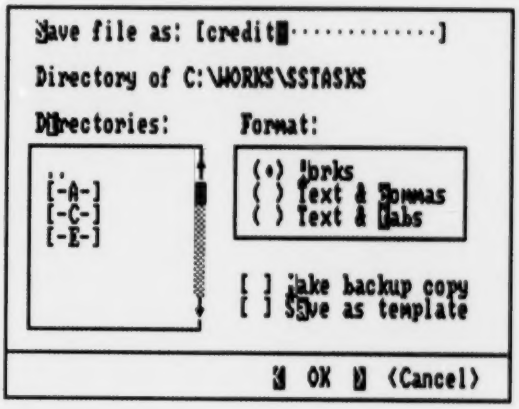
- press Alt
- press F (for **F**ile)
- press S (for **S**ave).

This will save your file with the same name. Unless the file is locked, (in which case you cannot *Save* but must use *Save As*) any changes you have made will be saved over the original text. If it is a new file, the procedure is the same as *Save As*.

Save As
to save a file with a different name from the original:

- press Alt
- press F (for **F**ile)
- press A (for Save **A**s)

a dialogue box appears:



- check that you are in the right directory
- type the new name (the cursor will be in the right place)
- press <Enter>

➤ To close a file

- press Alt
- press F (for **F**ile)
- press C (for **C**lose)
- you may be asked if you want to save changes before closing
  if the file is locked (ie. an exercise loaded from disk) type N (for **N**o)
  if the file is one you have created type Y (for **Y**es).

Up to eight files can be open at a time, but they will be on top of each other on screen, and the available screen space gets smaller. It is better to close a file before opening a new one.

➤ To print a file

- press Alt
- press P (for **P**rint)
- press P (for **P**rint) again
- press <Enter>

➤ To exit the program

- close all files
- press X (for E**x**it Works).

➤ Cell references

A spreadsheet is made up of cells which are arranged in rows and columns. In the Works spreadsheet the rows are numbered, and the columns are labelled with letters. A cell is defined by a row and column reference: for example B3 is the cell in column B and row 3.

➤ Moving around the spreadsheet

Use the arrow keys to move the cursor around the spreadsheet. The selected cell is highlighted.

➤ To enter a label

A label is a description. A label is usually text, but it can be a mixture of text and numbers. If it includes numbers they cannot be used in a calculation.

- move the cursor to the cell where you want to enter a label
- type in the word, or words
- press <Enter>

You will see the cell contents displayed at the top left of the screen. The inverted commas " in front of the cell contents indicate a label.

If you make a mistake while entering a label, use the backspace delete key. If you want to change the contents later, see Editing cell contents.

➤ To enter a number

- move the cursor to the cell where you want to enter a number
- type the number
- press <Enter>

You will see the contents of the cell displayed at the top left of the screen.

If you make a mistake while entering a number use the backspace delete key. If you want to change a number later, see Editing cell contents.

Numbers can be formatted in different ways; see Formatting numbers.

➤ To enter a formula

A formula can be made up of numbers, cell references of cells containing numbers to be used in a calculation and mathematical symbols. A formula always begins with an = sign, to tell the spreadsheet that what follows is a formula.

- move the cursor to the cell where you want to enter a formula
- type =
- type the formula
- press <Enter>

The formula will be displayed at the top left of the screen. The result of the calculation will be shown in the selected cell.

The spreadsheet uses the following symbols in a formula:

+ add **– subtract** **✳ multiply** **/ divide**

^ to the power of **SQRT(n) square root**
(**n** can be a number or a cell reference)

Examples:	=A1+A2	(add the number in A1 to the number in A2)
	=B7/C7	(divide the number in B7 by the number in C7)
	=D5^2	(square the number in cell D5)
	=SQRT(F2)	(square root of the number in cell F2)

➤ Editing cell contents

- move to the cell which is to be edited
- press F2 to edit

(you will see a text cursor at the end of the cell contents displayed at the top left of the screen)

- move the cursor with the left and right arrow keys
- use backspace delete to delete the letter or number before the cursor
- type letters or numbers at the position of the cursor
- press <Enter> to finish editing.

➤ A range of cells

A range of cells is a number of adjacent cells in a row or column. A range is referred to by the first and last cell in the range, separated by a colon.

Examples: D2:D20 refers to all the cells in column D from D2 to D20.
B2:G2 refers to all the cells in row 2 from B2 to G2.

➤ To add a range of cells (SUM)

The spreadsheet uses the command SUM followed by the range of cells containing the numbers to be added:

Example: to add the numbers in column B from B2 to B8, the formula is:

=SUM(B2:B8) (the = sign shows it is a formula)

➤ To select cells

A single cell

- move the cursor to the required cell.

A range of cells

- move the cursor to the first cell in the range
- press function key F8

the letters EXT (extend) will appear on the bottom right of the screen

Either: • use the down arrow key to extend the selection down a column

Or: • use the right arrow key to extend the selection across a row

Or: • a combination of the above to select a block of cells.

Note: cells in a complete row, column or all the spreadsheet can be selected from the Select menu.

To remove selection press <Esc> (the letters EXT will disappear) and press any arrow key.

➤ To format numbers

- select the cell or cells containing the numbers to be formatted (see instruction sheet 7)
- press Alt
- press T (for Format)

for whole numbers: press X to select fixed
type 0 (zero) for the Number of decimals
press <Enter>

for decimals: press X to select fixed
type the number of decimal places required
press <Enter>

for money: press U to select currency
type 2 for the number of decimal places
press <Enter>

for percent: press P to select percent
type the number of decimal places required
press <Enter>

➤ To copy a formula to adjacent cells

- move the cursor to the cell containing the formula to be copied
- press F8
- use the arrow keys to extend the selection to include all the cells where you want the formula copied to
- press Alt
- press E (for Edit)

Either
- press F (Fill Down) to copy the formula down a column

Or
- press R (Fill Right) to copy the formula across a row.

➤ To align cell contents

- select the cell or cells
- press Alt
- press T (for Format)
- press S (for **S**tyle)
- type the letter of the option you want (for example C for **C**entre)
- press <Enter>

Note: the default setting is General which will align numbers on the right and labels on the left of the cell.

➤ To change column widths

- move the cursor to any cell in the column
- press Alt
- press T (for Format)
- press W (for Column **W**idth)
- type a number for the width of the the column
- press <Enter>

Note: to change the column width of all cells in the spreadsheet, first choose **A**ll from the **S**elect menu.

➤ Horizontal lines

Use the symbol above the minus sign (next to zero on the top row of keyboard).
To get this symbol, hold down SHIFT and press the key.
If you want a long line, you can enter a long line in the first cell and it will 'spill over' to fill cells to the right, instead of entering lines separately in each cell.

➤ Vertical lines

Use the symbol above the backslash (\).
To get this symbol, hold down SHIFT and press the key.

Vertical lines occupy a cell. To improve the presentation, change the column width to 3 and centre the line (see above: To align cell contents).

➤ To look at a chart

- press Alt
- press V (for **V**iew)
- press the number of the chart you want to view.

When you have finished looking at a chart press <Esc>. Although you can now see the spreadsheet, you are still in chart mode which means you can make changes to a chart, or view other charts. The screen looks the same in chart mode and spreadsheet view, but the menu headings are different. To make changes to the spreadsheet return to spreadsheet view (see below).

➤ To return to the spreadsheet

- press Alt
- press V (for **V**iew)
- press S (for **S**preadsheet).

➤ To create a new chart

- select the appropriate cells
- press Alt
- press V (for **V**iew)
- press N (for **N**ew Chart)
- press <Esc>

➤ To add or change X-series labels

In a bar chart the X-Series labels will label the columns standing on the horizontal axis (x-axis). In a pie chart they will label the sectors of the pie.

- select the cells containing the labels
- press Alt
- press D (for **D**ata)
- press X (for **X**-Series)
- look at the chart to check the labels.

➤ To add a title to a chart

- press Alt
- press D (for **D**ata)
- press T (for **T**itles)
- type the name of the chart (the cursor will be in the right place)
- press <Enter>
- look at the chart to see the title.

➤ To format a chart to a pie chart

- press Alt
- press T (for Format)
- press P (for **P**ie).

➤ To rename a chart

- press Alt
- press V (for **V**iew)
- press C (for **C**harts)
- use the cursor keys to highlight the chart you want to rename
- press the TAB key to move the cursor to the brackets next to **Name**
- type the new name of the chart
- hold down Alt and press R (for **R**ename)
- rename other charts in the same way
- when you have finished, hold down Alt and press D (for **D**one).

➤ To format charts for black and white

Some combinations of computer and monitor do not display colour charts adequately; the charts will be much clearer in black and white. If colour charts are clear on your system you can leave them in colour if you choose.

If you are printing out charts, format them for black and white first (unless you have a colour printer).

- press Alt
- press O (for **O**ptions - Works 2) OR press P (for **P**rint - Works 3)
- press F (for **F**ormat For B&W).

➤ Locking cells

The contents of cells can be protected against accidental change or deletion. This is a two-stage process - locking cells and protecting data.

All cells in a Microsoft Works spreadsheet are locked initially, but the lock has no effect until you turn on protection. However, if you turn on protection without first unlocking any cells, you will lock ALL cells.

When creating files for students you may want to lock some cells but not others; the process is to unlock the cells students will use, then turn on data protection.

➤ To unlock cells

- select cell(s) you do NOT want locked (the ones where students will enter or change data)
- press Alt
- press T (for Format)
- press S (for **S**tyle) - you will see a cross or a dash next to Locked (depending on whether you have selected a single cell or a number of cells)
- press K (for Locked) and the cross or dash will disappear
- press <Enter>

Note: this command has a toggle effect - pressing K will alternately lock and unlock cells. A cross (or dash) denotes that the cell (or cells) is locked.

➤ To protect data

- press Alt
- press O (for **O**ptions)
- press P (for **P**rotect Data)

Note: this command has a toggle effect - pressing P will alternately turn on and turn off protection. When the file is protected a star will be shown next to Protect data on the Options menu.

When a file is protected, changes can be made to the data in unlocked cells, but no changes can be made to the format of cell contents. This means, for example, that students cannot format numbers to currency on a protected file. You must either leave the file unprotected, or include instructions to turn off protection, and turn it on again.

➤ Locking files

You need to lock files which students are going to use, so that the orginal version will not be lost by the student making changes and saving with the same filename.

You will need to unlock a locked file if you want to make changes to it.

Files are locked through operating system commands. You can give these commands from within the Works program. The file you want to lock or unlock should be closed, but you should be in the directory where the file is saved.

➤ To lock a file

From the File menu:

- press R (for **R**un Other Programs)
- press Tab to move the cursor to the Command line
- type:

attrib +r name.wks <Enter>

Where name is the name of the file you want to lock. You must include the file extension .wks (this indicates that it is a Works spreadsheet file).

➤ To lock several files

at the command line type:

attrib +r *.wks <Enter>

this will lock all files with the file extension .wks
(all the Works spreadsheet files in the directory)

➤ To unlock a file

at the command line type:

attrib -r name.wks <Enter>

➤ Troubleshooting

Problem	Possible action
Your spreadsheet figures have disappeared off the screen	It is likely you have moved to another part of the spreadsheet; hold down the Ctrl key and press Home – this takes you to cell A1
When you enter a formula into a cell the formula is displayed in the cell instead of the result of the calculation	You have forgotten to type = at the beginning of the formula; edit the formula or retype it
A number is displayed in the exponential format eg: 1.25E+05	The number is in general format and too big for the cell; format the number to fixed
A cell displays #####	The number is too big for the width of the cell; widen the cell
A percentage is displayed 100 times bigger than you intended, eg. 2% is displayed as 200%	The cell is formatted to percent; when you type in the number you must either type the % symbol after the number or enter the percentage as a decimal fraction, eg. 0.02
The results of a percentage calculation are much bigger than you expected	Check that the cell containing the percentage is formatted to percent
You cannot enter data into a cell – you get the message 'Cannot change – locked'	The cell is locked and Protect data is on; turn off data protection and unlock the cell – see instruction sheet 12
Cannot use this command right now	1. You have not completed the current activity – you will see 'Press ENTER, or ESC to cancel' on the bottom of the screen; do this to continue 2. The data in the spreadsheet is protected; see instruction sheet 12
When creating charts you end up with far too many!	You are choosing View New Chart instead of looking at a numbered chart; this often happens when you have changed the format of a chart, for example from the initial bar chart to a pie-chart – the formal is new but the chart isn't; select View Charts to delete unwanted charts
When you look at a chart black boxes appear in place of text	Your computer is too low a specification to display charts (186 only)
Screen messages which you do not understand	See section on messages in Microsoft Works reference manual
Cannot save file	File is locked; file must be saved with a different name (see instruction sheet 3)

➤ Works 3

The illustrations in this booklet are for Microsoft Works version 2. If you are using version 3 the screen will appear slightly different. There are only minor differences in instructions and these are indicated where necessary.

➤ Toolbar

Version 3 has a toolbar shown below the ruler. This is a short cut to certain functions using the mouse. It is suggested that this is not used or displayed on screen initially, unless you are already competent in the use of a mouse.

➤ To hide the toolbar

- press Alt
- press O (for **O**ptions)

If the toolbar is on, there will be a bullet next to Show tool**b**ar

- press B (for Show Tool**b**ar) - the bullet will disappear
- press <Enter>

Note: this command has a toggle effect - from the Options menu, pressing B will alternate between show and hide the toolbar.

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Microsoft Works for Windows can be operated by the mouse or keyboard. The instructions in this booklet are written for the keyboard, with a few exceptions. If you are not familiar with using the mouse, read the notes below.

➤ Using the mouse

The mouse must be used on a flat clean surface. Put the heel of your hand on the table, and let the palm of your hand close over the mouse so that your fingers rest naturally on the mouse buttons. The mouse controls the pointer on the screen. Move the pointer on to the chosen icon or menu item, and use one of the following:

click
press the left mouse button once and release it immediately

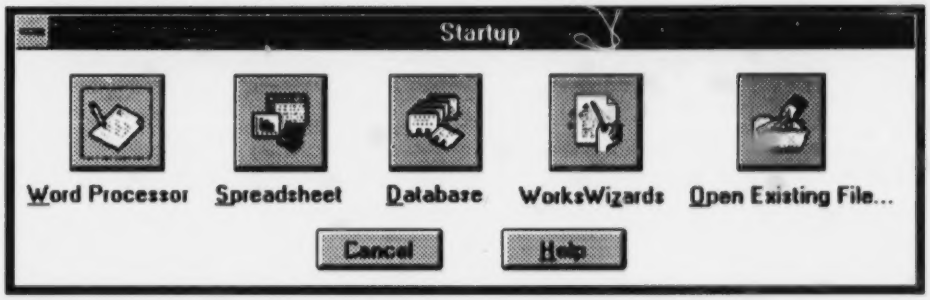
double-click
press the left mouse button twice in quick succession

➤ Using the mouse with the instructions

To use the instructions in this booklet with a mouse, ignore the Alt key press (which highlights the menu bar), move the pointer on to the menu item given in the keyboard instructions and click the left mouse button.

➤ To load the program

- double click on the Microsoft Works for Windows icon (this may be labelled MSWorks)
- or choose Works from the menu on your computer
- you will see the Startup box shown below:



➤ To open an existing file

(a) when you first load Microsoft Works:

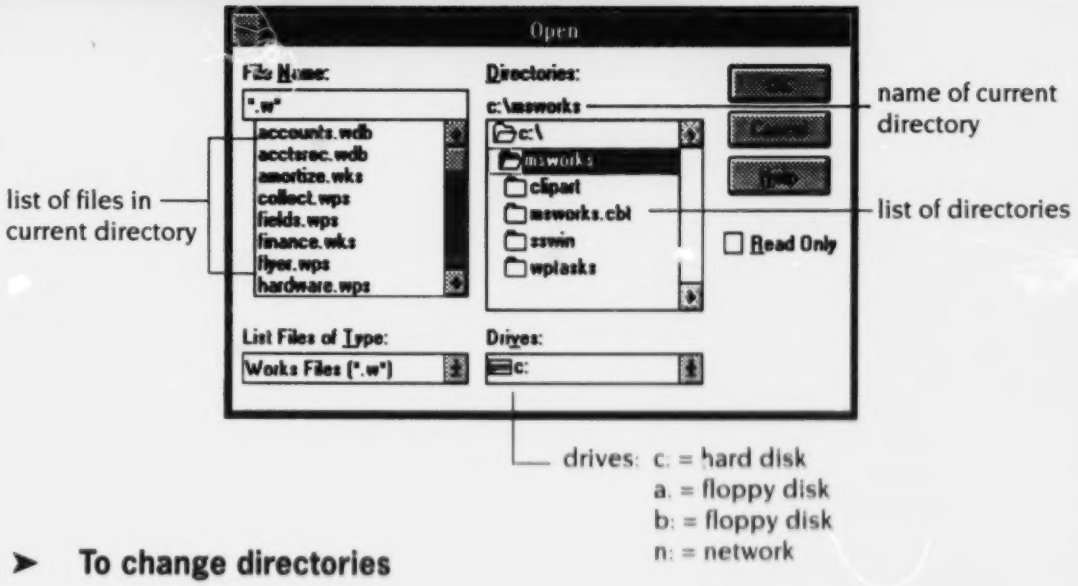
- press O (for Open existing file)
- read the notes on files and directories below, and on Sheet 2, then see 'To open an existing file - summary'

(b) when the spreadsheet program is already running:

- press Alt
- press F (for File)
- press O (for Open Existing File)
- read the notes on files and directories below, and on Sheet 2, then see 'To open an existing file - summary'

➤ Files and directories

Individual files are organised into directories in the same way as individual worksheets are organised in your filing cabinet. On Sheet 2 there is an example of a dialogue box, which appears when you choose *Open Existing File* from the File menu.



➤ To change directories

If the file you want is in a directory on the hard disk, the directory name will appear in the directory list on the right of the dialogue box.

If the file you want is on a floppy disk choose drive a: from the drive box.

- move the cursor (see below) to highlight the directory or drive you want
- press <Enter>

➤ Moving the cursor in a dialogue box

- use the TAB key to move to different sections
- use the arrow keys to move the cursor inside sections

➤ To open an existing file - summary

- press Alt (ignore this when you first load the program)
- press F (for File) (ignore this when you first load the program)
- press O (for Open Existing File)
- if necessary, change directory or drive
- type in the name of the file, or move the cursor to highlight the filename (see above)
- press <Enter>
- if the file is locked a message will appear telling you that the file is read-only; press <Enter> to open the file.

➤ To create a new file

(a) when you first load Microsoft Works:

- press S (for Spreadsheet).

(b) when the spreadsheet program is already running:

- press Alt
- press F (for File)
- press N (for Create New file)
- press S (for Spreadsheet).

➤ To save a file

Save

- press Alt
- press F (for File)
- press S (for Save).

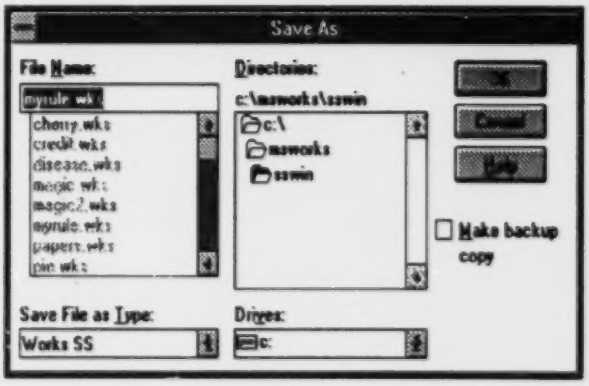
This will save your file with the same name. Unless the file is locked, (in which case you cannot *Save* but must use *Save As*) any changes you have made will be saved over the original text. If it is a new file, the procedure is the same as *Save As*.

Save As
to save a file with a different name from the original:

- press Alt
- press F (for File)
- press A (for Save As)

a dialogue box (right) appears

- check that you are in the right directory
- type the new name (the cursor will be in the right place)
- press <Enter>



➤ To close a file

- press Alt
- press F (for File)
- press C (for Close)
- you may be asked if you want to save changes before closing.

  If the file is locked (ie. an exercise loaded from disk) type N (for No).

  If the file is one you have created type Y (for Yes).

➤ To print a file

- press Alt
- press F (for File)
- press P (for Print)
- press <Enter>

➤ To exit the program

- close all files
- press Alt
- press F (for File)
- press X (for Exit Works).

➤ Cell references

A spreadsheet is made up of cells which are arranged in rows and columns. In the Works spreadsheet the rows are numbered and the columns are labelled with letters. A cell is defined by a row and column reference: for example B3 is the cell in column B and row 3.

➤ Moving around the spreadsheet

Use the arrow keys to move the cursor around the spreadsheet. The selected cell is highlighted.

➤ To enter a label

A label is a description. A label is usually text, but it can be a mixture of text and numbers. If it includes numbers they cannot be used in a calculation.

- move the cursor to the cell where you want to enter a label
- type in the word, or words
- press <Enter>

You will see the cell contents displayed at the top left of the screen. The inverted commas " in front of the cell contents indicate a label.

If you make a mistake while entering a label, use the backspace delete key. If you want to change the contents later, see Editing cell contents.

➤ To enter a number

- move the cursor to the cell where you want to enter a number
- type the number
- press <Enter>

You will see the contents of the cell displayed at the top left of the screen.

If you make a mistake while entering a number use the backspace delete key. If you want to change a number later, see Editing cell contents.

Numbers can be formatted in different ways; see Formatting numbers.

➤ To enter a formula

A formula can be made up of numbers, cell references of cells containing numbers to be used in a calculation, and mathematical symbols. A formula always begins with an = sign, to tell the spreadsheet that what follows is a formula.

- move the cursor to the cell where you want to enter a formula
- type =
- type the formula
- press <Enter>

The formula will be displayed at the top left of the screen. The result of the calculation will be shown in the selected cell.

The spreadsheet uses the following symbols in a formula:

+ add **– subtract** *** multiply** **/ divide**

^ to the power of **SQRT(n) square root**
(**n** can be a number or a cell reference)

Examples:	=A1+A2	(add the number in A1 to the number in A2)
	=B7/C7	(divide the number in B7 by the number in C7)
	=D5^2	(square the number in cell D5)
	=SQRT(F2)	(square root of the number in cell F2)

➤ Editing cell contents

- move to the cell which is to be edited
- press F2 to edit

  (you will see a text cursor at the end of the cell contents displayed at the top left of the screen)

- move the cursor with the left and right arrow keys
- use backspace delete to delete the letter or number before the cursor
- type letters or numbers at the position of the cursor
- press <Enter> to finish editing.

➤ A range of cells

A range of cells is a number of adjacent cells in a row or column. A range is referred to by the first and last cell in the range, separated by a colon.

Examples: D2:D20 refers to all the cells in column D from D2 to D20.
B2:G2 refers to all the cells in row 2 from B2 to G2.

➤ To add a range of cells (SUM)

The spreadsheet uses the command SUM followed by the range of cells containing the numbers to be added:

Example: to add the numbers in column B from B2 to B8, the formula is:

=SUM(B2:B8) (the = sign shows it is a formula)

➤ To select cells

A single cell

- move the cursor to the required cell (or use the mouse to point and click).

A range of cells

- move the cursor to the first cell in the range
- press function key F8

the letters EXT (extend) will appear on the bottom right of the screen

Either: • use the down arrow key to extend the selection down a column

Or: • use the right arrow key to extend the selection across a row

Or: • a combination of the above to select a block of cells

Note: cells in a complete row, column or all the spreadsheet can be selected from the Select menu.

To remove selection press <Esc> (the letters EXT will disappear) and press any arrow key.

➤ To format numbers

- select the cell or cells containing the numbers to be formatted (see instruction sheet 7)
- press Alt
- press T (for Format)

for whole numbers: press X to select fixed
type 0 (zero) for the Number of decimals
press <Enter>

for decimals: press X to select fixed
type the number of decimal places required
press <Enter>

for money: press U to select currency
type 2 for the number of decimal places
press <Enter>

for percent: press P to select percent
type the number of decimal places required
press <Enter>

➤ To copy a formula to adjacent cells

- move the cursor to the cell containing the formula to be copied
- press F8
- use the arrow keys to extend the selection to include all the cells where you want the formula copied to
- press Alt
- press E (for Edit)

Either • press W (Fill Down) to copy the formula down a column

Or • press R (Fill Right) to copy the formula across a row.

➤ To align cell contents

- select the cell or cells
- press Alt
- press T (for Format)
- press S (for Style)
- type the letter of the option you want (for example C for Centre)
- press <Enter>

Note: the default setting is General which will align numbers on the right and labels on the left of the cell.

➤ To change column widths

- move the cursor to any cell in the column
- press Alt
- press T (for Format)
- press W (for Column Width)
- type a number for the width of the column
- press <Enter>

Note: to change the column width of all cells in the spreadsheet, first choose All from the Select menu.

➤ To border cells

Borders can be used to improve presentation. They can highlight a cell or group of cells, or underline column headings.

- select the cell (or cells) to be bordered
- press Alt
- press T (for Format)
- press B (for Border)
- press the letter of the option you want
- press <Enter>

Borders do not show clearly unless the gridlines on the spreadsheet are turned off. To turn them off:

- press Alt
- press O (for Options)
- press G (for Show Gridlines) - the tick will disappear.

➤ To look at a chart

- press Alt
- press C (for Charts)
- press the number of the chart you want to view.

If the chart does not fill the screen, use the mouse to move the pointer to the box containing the up-arrowhead on the top right of the chart window, and click the left mouse button. This will maximise the chart window.

When you have already viewed a chart, it will be listed in the Window menu (see below). Use Window to move between charts and the spreadsheet.

➤ To return to the spreadsheet

- press Alt
- press W (for Window)
- press the number of the spreadsheet file (this will normally be 1).

➤ To create a new chart

- select the appropriate cells
- press Alt
- press C (for Charts)
- press N (for Create New Chart).

➤ To add or change X-Series labels

In a bar chart the Category (X) Series will label the columns standing on the horizontal axis (x-axis).

- display the chart on screen
- press Alt
- press E (for Edit)
- press S (for Series)
- hold down Alt and press C (to move to Category (X) Series)
- type the range of cells which contain the labels (for example, H5:H12)
- press <Enter>

If you now format the chart to a pie chart the Category (X) Series will label the sectors of the pie.

➤ To add a title to a chart

- display the chart on screen
- press Alt
- press E (for Edit)
- press T (for Titles)
- type the name of the chart (the cursor will be in the right place)
- press <Enter>

➤ To format a chart to a pie chart

- display the chart on screen
- press Alt
- press G (for Gallery)
- press P (for Pie)
- press 4 to select chart style 4 and press <Enter>

➤ To rename a chart

- display the spreadsheet on screen
- press Alt
- press C (for Charts)
- press A (for Name)
- use the up or down arrow key to highlight the chart you want to rename
- hold down Alt and press N (to move the cursor to the box next to Name:)
- type the new name of the chart
- hold down Alt and press R (for Rename)
- rename other charts in the same way
- when you have finished, press <Enter>

➤ To format charts for black and white

On some monitors charts will be much clearer in black and white. If colour charts are clear on your system you can leave them in colour if you choose.

If you are printing out charts format them for black and white first (unless you have a colour printer).

- display the chart on screen
- press Alt
- press O (for Options)
- press P (for Display as Printed)

➤ Locking cells

The contents of cells can be protected against accidental change or deletion. This is a two-stage process - locking cells and protecting data.

All cells in a Microsoft Works spreadsheet are locked initially, but the lock has no effect until you turn on protection. However, if you turn on protection without first unlocking any cells, you will lock ALL cells.

When creating files for students you may want to lock some cells but not others; the process is to unlock the cells students will use, then turn on data protection.

➤ To unlock cells:

- select cell(s) you do NOT want locked (the ones where students will enter or change data)
- press Alt
- press T (for Format)
- press S (for Style)
- press K (for Locked) twice - the box next to Locked should be blank
- press <Enter>

Note: a cross (or shading) in the box indicates that the cell (or cells) is locked.

➤ To protect data

- press Alt
- press O (for Options)
- press P (for Protect Data)

Note: This command has a toggle effect - pressing P will alternately turn on and turn off protection. When the file is protected a tick will be shown next to Protect data on the Options menu.

When a file is protected, changes can be made to the data in unlocked cells, but no changes can be made to the format of cell contents. This means, for example, that students cannot format numbers to currency on a protected file. You must either leave the file unprotected, or include instructions to turn off protection, and turn it on again.

➤ Locking files

You need to lock files which students are going to use, so that the orginal version will not be lost by the student making changes and saving with the same filename. To *write-protect* or to make a file *read-only* are other ways of saying this.

You will need to unlock a locked file if you want to make changes to it.

Files can be locked through the Windows File Manager. The file you want to lock or unlock should be closed.

➤ To lock a file

You should seek help with this if you are not familiar with Windows.

- return to the Windows Program Manager
- open File Manager
- open the directory containing the files you wish to lock
- select the name(s) of the file(s) you wish to lock
- choose Properties from the File menu
- click on the box next to Read Only - a cross will appear to show that the file is now locked

➤ Troubleshooting

Problem	Possible action
The spreadsheet or chart does not fill the screen – the window is on top of other windows which you can still see	Use the mouse to move the pointer to the top righthand corner of the spreadsheet or chart window and click on the up arrowhead – this will maximise the window
Your spreadsheet figures have disappeared off the screen	It is likely you have moved to another part of the spreadsheet; hold down the Ctrl key and press Home – this takes you to cell A1
When you enter a formula into a cell the formula is displayed in the cell instead of the result of the calculation	You have forgotten to type = at the beginning of the formula; edit the formula or retype it
A number is displayed in the exponential format eg: 1.25E+05	The number is in general format and too big for the cell; format the number to fixed
A cell displays #####	The number is too big for the width of the cell; widen the cell
A percentage is displayed 100 times bigger than you intended, eg. 2% is displayed as 200%	The cell is formatted to percent; when you type in the number you must either type the % symbol after the number or enter the percentage as a decimal fraction, eg. 0.02
The results of a percentage calculation are much bigger than you expected	Check that the cell containing the percentage is formatted to percent
You cannot enter data into a cell – you get the message 'Cannot change – locked'	The cell is locked and Protect data is on; turn off data protection and unlock the cell – see instruction sheet 12
Cannot use this command right now	You have not completed the current activity – you will see 'Press ENTER, or ESC to cancel' on the bottom of the screen; do this to continue
Screen messages which you do not understand	See section on messages in Microsoft Works reference manual
Cannot save document	File is locked; file must be saved with a different name (see instruction sheet 3)

Further copies are available from:

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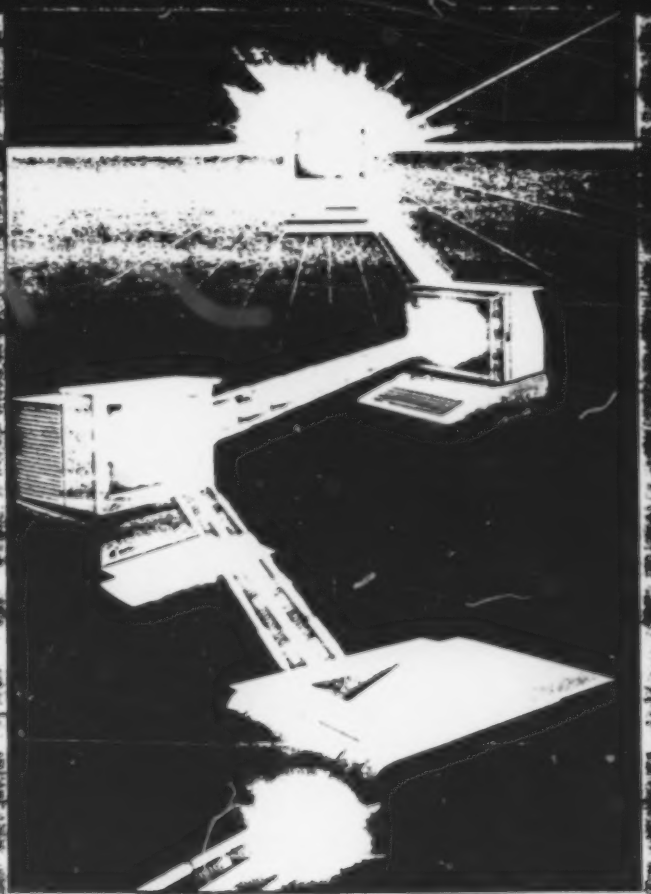
ALBSU
The Basic Skills Unit

Registered Charity No.1003969

IT BASIC SKILLS



USING A SPREADSHEET TO DEVELOP NUMERACY SKILLS

BEST COPY AVAILABLE

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Introduction

Aims of the pack

IT and Basic Skills provides learning materials and guidance notes for two separate training courses in the use of computers to develop basic skills:

- Using a wordprocessor to develop literacy skills
- Using a spreadsheet to develop numeracy skills.

Each course is divided into four sections.

Contents of the pack

- Using a spreadsheet to develop numeracy skills (this book)
- Instructions for Microsoft Works spreadsheet
- Using a wordprocessor to develop literacy skills
- Instructions for Microsoft Works wordprocessor
- One disk.

Who is the pack aimed at?

The materials are intended for tutors teaching basic skills in a variety of settings: Adult Education Centres, Open Learning Centres, Community Colleges, Colleges of FE, Training Organisations, the Prison Education Service etc.

The pack can be used as self-access by individuals; however, tutors with no previous experience in using a computer are strongly advised to seek assistance in getting started with the materials. All tutors will benefit from discussing the issues raised and sharing ideas with colleagues.

The materials can also be used to deliver two separate training courses over four sessions each. In this case each course should be led by a trainer with some expertise in using a wordprocessor or spreadsheet and sound knowledge of basic skills teaching.

Using Microsoft Works

The pack is designed to be used with Microsoft Works (MS DOS) (versions 2 or 3) or Microsoft Works for Windows (version 2). The program is not supplied with this pack.

Microsoft Works is an integrated package (wordprocessor, spreadsheet, database) for IBM PC compatible computers. The DOS version will also run under a PC emulator on Acorn Archimedes (check with your dealer for machine specification) and RM Nimbus PC -186 (Nimbus firmware version 1.32D or later is required).

Using the materials

Aims of the course

To explore the possibilities of using a spreadsheet to develop numeracy skills.

How the course is organised

The course is organised in four sections. Notes at the beginning of each section include aims and objectives, an outline, skills checklist and procedural guidance on using the materials.

The materials consist of tasksheets, which follow the section notes, and answer sheets. The tasksheets refer to disk files which are provided on floppy disk, and instruction sheets for operating Microsoft Works which are in a separate book. The course materials are designed for tutors, and provide a model for work with students.

After completing each section you are advised to practise and consolidate computer skills before progressing to the next section.

Essential resources

Each of the sections involves hands-on activities at the computer. A copy of Microsoft Works is needed, either installed on the hard disk, or available on a floppy disk.

Delivering training

If you are using these materials to deliver a training course the section notes should help you to plan each session. You are strongly advised to work through the materials yourself prior to training.

It is recommended for most activities that trainees work in pairs at the computer as the discussion generated contributes significantly to increasing awareness and understanding of an integrated approach. A group of three trainees is preferable to a trainee working alone.

City and Guilds 9285

This course will assist tutors who are working towards ALBSU/City and Guilds Certificate in Teaching Basic Skills 9285. Unit C7: Support the use of information technology, Elements C1 and C2, may be addressed with reference to using a spreadsheet.

Using the disk files – Works 2 and 3 (MS DOS)

Files

Wordprocessing and spreadsheet files are provided on one floppy disk. The spreadsheet files are stored in a directory called SSTASKS. Spreadsheet files are identified by the file extension .WKS.

Hard disk

If Microsoft Works is installed on a hard disk in a directory called WORKS:

- a subdirectory of the WORKS directory called SSTASKS

from C:>	type: cd works<Enter>
from C:\works	type: md sstasks<Enter>
	type: cd sstasks<Enter>

- copy the spreadsheet files from the floppy disk to the directory called SSTASKS on the hard disk

  from C:\works\sstasks type: copy A:\sstasks*.wks

Note: the pathname for the spreadsheet files will be:

C:\works\sstasks\<filename>.

If Microsoft Works is in a directory called something other than WORKS, replace WORKS in the instructions above with the appropriate directory name.

One floppy disk drive

If you are running Microsoft Works from a single floppy disk you will need to swap the program disk and the disk with the files on in order to open the spreadsheet files.

Note: the pathname for the spreadsheet files will be:

A:\sstasks\<filename>

Two floppy disk drives

If you have two floppy disk drives you can run Microsoft Works in drive A: and open the files from a disk in drive B.

Note: the pathname for the spreadsheet files will be:

B:\sstasks\<filename>

Using the disk files – Works for Windows

Works for Windows

You cannot run Microsoft Works for Windows from a floppy disk; it must be installed on a hard disk which runs Microsoft Windows.

Files

Wordprocessing and spreadsheet files are provided on one floppy disk. The spreadsheet files are stored in a directory called SSWIN. Spreadsheet files are identified by the file extension .WKS.

Hard disk

To install the spreadsheet files on a hard disk (if you are not familiar with Windows, get someone to do this for you):

- create a subdirectory of the MSWORKS directory called SSWIN:

  from Windows Program manager load File manager
  highlight the MSWORKS directory
  from the file menu select create directory and type SSWIN:

- copy the spreadsheet files from the floppy disk to the directory called SSWIN on the hard disk:

  use File manager to copy the files from a:SSWIN to c:\MSWORKS\SSWIN.

If Microsoft Works for Windows is in a directory called something other than MSWORKS, replace MSWORKS in the instructions above with the appropriate directory name.

Floppy disk

You can open the files from floppy disk without installing them on the hard disk. The spreadsheet instructions with this pack will tell you how to do this.

Note: the pathname for the spreadsheet files will be:

a:\sswin\<filename>

Section One

➤ Aim

To demonstrate an integrated approach to the development of numeracy skills and the acquisition of spreadsheet skills through a range of discrete exercises, and to evaluate this approach.

➤ Objectives

- to ensure an understanding of basic computer terminology
- to work through prepared exercises and analyse numeracy skills practised and spreadsheet skills learned
- to acquire basic spreadsheet skills
- to consider how the exercises can be adapted for different levels of numeracy
- to evaluate this approach to using a spreadsheet to develop numeracy skills.

➤ Outline of section

- health and safety
- computer vocabulary
- what is a spreadsheet?
- tasks 1 - 5
- evaluation and feedback.

➤ Skills checklist

The following computer skills will be introduced. It is assumed that you are familiar with the numeracy skills listed.

Computer skills

- load the program
- open a file
- close a file
- save a file
- cell references
- moving around the spreadsheet
- entering a number, label, formula
- selecting cells
- adding a range of cells
- copying a formula
- formatting numbers

Numeracy skills

- four rules, powers, square roots
- order of operations, brackets
- number patterns and sequences
- problem-solving strategies
- reading information from tables
- rounding
- devising formulae
- ratio and proportion
- metric conversion

➤ Materials needed

In addition to the materials in this book you will need:

- instruction sheets for Microsoft Works spreadsheet
- disk files: **rule, myrule, magic, magic2, prices, cherry, pie.**

➤ Procedure

The times indicated next to each heading are included as guidance for trainers using these materials to deliver a training course.

1. Introduction *5 mins*

- make sure you have read through the introductory section to the course
- read through the introduction to this section to understand the aims and objectives.

2. Health & safety *5 mins*

- take a break from the screen whenever you feel the need, either by looking away, or moving away
- you cannot damage hardware or software by use and experimentation; the worst you can do is lose your own work
- equipment can be damaged by spillage of drink or crumbs of food - keep them away from the computer.

3. Computer vocabulary *15 mins*

- work through the computer vocabulary exercise.

4. What is a spreadsheet ? *5 mins*

A spreadsheet is designed to store numbers and to enable calculations to be performed on those numbers through the use of formulae. Words can also be entered into a spreadsheet to label the figures.

There are many different spreadsheet programs but they all have the same format: a grid of slots or cells arranged in rows and columns. Each cell has its own unique reference.

- Look at the diagram *Spreadsheet: rows, columns and cell references* to understand cell references.

5. The tasks *2 hrs*

- there are five tasks; work through them at your own pace
- instructions are provided to enable you to carry out the tasks - please read them!
- the task sheets refer to the instruction sheets - work from the tasksheets and refer to the instructions as needed
- complete the record sheet provided after each task - make brief notes on the numeracy skills practised, the spreadsheet skills introduced, and how the exercise might be adapted, simplified or extended for different levels of numeracy skills, or for different topics.

Note: Getting started is the most difficult part. If you have not used a computer before you are advised to seek help with this section.

6. Evaluation *30 mins*

Think about the purpose of the activities you have completed and the implications for work with students. If possible discuss your ideas with a colleague.

- for each task you will have used the record sheet to:
  - analyse skills
  - think about ideas for adapting or developing the task.

  Compare your notes with the completed record sheet provided.
- what do you think are the advantages and disadvantages of using a spreadsheet to develop numeracy skills?

7. Feedback

What are the advantages and disadvantages of using a spreadsheet to develop numeracy skills?

advantages:

- new approach to old problems
- students can concentrate on 'how to' rather than mechanics of calculation
- contributes to development of problem-solving skills
- begin to acquire spreadsheet skills
- increases self-esteem in use of 'real' software
- for tutors, exercises can be easily adapted for different levels of numeracy.

disadvantages:

- use of non-mathematical symbols for multiplication and division might be confusing
- time taken by tutors to prepare tasks and instructions
- some students might think it is not worth using a spreadsheet for these tasks, a calculator would do.

Computer Vocabulary

Fill in the gaps with a word from the list below, then check your answers on the next page.

1. ..... is a key on the keyboard, found at the right hand side, sometimes called Return, and often used to tell the computer to carry out an action.
2. A..... can be dot matrix, laser, inkjet, black and white or colour. It provides hard (paper) copy.
3. ..... is the name given to all the physical parts of a computer: screen, keyboard, printer and so on.
4. ..... is the general word for all the programs and applications that run on a computer.
5. ..... is the name of a key that does nothing on its own and is always used with another key.
6. The..... provides the means to give information to the computer using different keys.
7. The..... provides the means to move a pointer on screen and to give information to the computer by clicking its buttons.
8. The ..... lights up when switched on, as a television does.
9. The ..... is the piece of equipment that holds the screen.
10. A..... is a series of instructions contained on disk, which tell the computer what to do next.
11. A..... is where you put a disk so that the computer can read it.
12. A..... may be part of the main computer (internal) or an add-on unit (external). It is a storage space and can store much more information than a floppy disk.
13. There are two ..... keys, one at each side of the keyboard. They can be used to make capital letters.
14. A..... is either 3.5" or 5.25". The larger ones are in a soft case and not very robust. The smaller ones are encased in plastic and therefore much stronger.
15. A..... tells the computer what to do and can be given in different ways. Older technology often requires you to type these in. Recent developments rely much more on choosing from a menu.

enter	mouse	control	command	hard disk
hardware	software	printer	shift	keyboard
screen	monitor	floppy disk	program	disk drive

Computer Vocabulary Answers

1. enter
2. printer
3. hardware
4. software
5. control
6. keyboard
7. mouse
8. screen
9. monitor
10. program
11. disk drive
12. hard disk
13. shift
14. floppy disk
15. command

➤ How did you score?

0 It seems that all the joy of learning about computers is ahead of you. You will probably need some help to get started using this training pack.

1-5 You have some very basic knowledge of computers but may need some help getting started with the training pack.

6-10 Just a few things to sort out, you should be able to start on the pack with no problems.

11-15 The technical side will hold no fears for you. This means that you can concentrate on the basic skills.

Rows, Columns and Cell References

columns

rows

	A	B	C	D	E
1	This is cell A1				
2					
3				201	
4		This is cell B4			
5					1992
6	50				
7					
8				This is cell D8	
9					
10		19			
11					
12					
13			This is cell C13		
14					

1. what number is in cell A6?
2. what number is in cell D3?
3. which cell is the number 19 in?
4. which cell is the number 1992 in?

What is the Rule?

➤ Exercise 1

1. Load Microsoft Works (*instruction sheet* 1).

2. Open the file **Rule** (*sheet* 1).

3. In each row the second number is calculated from the first number according to a rule, or formula.

4. Put the cursor on the number in cell C2.
   Enter a new number and see what happens to the number in cell E2. Try as many different numbers as you need to work out Rule 1 (*sheet* 5).

   You may find it helpful to write down the numbers you try, and the answers they give.

   Write down the rule (a) in words
   (b) as a formula

5. Work out the remaining rules by changing the number in column C and watching what happens to the number in column E. Write down each rule.

6. Close the file (*sheet* 4).

Answers on page 22.

➤ Exercise 2

1. Open the file **Myrule** (*sheet* 1).

2. This has been set up for you to enter your own rules.

3. For each rule put a number in column C and a formula in column E (*sheet* 6).
   Examples of formulae can be seen in the answers to exercise 1.

   Remember to type = before entering a formula

4. Save the file with a new name (*sheet* 3).

5. Ask someone to try out your rules.

6. Close the file.

Magic Squares

➤ Exercise 1

1. Open the file **Magic** (*sheet* 1).
2. The numbers in a magic square are all different, but they add up to the same total in all directions. The sum of each column is the same as the sum of each row which is the same as the sum of each diagonal.
3. What is the total of each row, column and diagonal to make this square magic?
4. Complete the magic square by entering the missing numbers (*sheet* 5).
5. Close the file (*sheet* 4).

➤ Exercise 2

1. Open the file **Magic2** (*sheet* 1).
2. This magic square does not have the formulae entered to work out the sum of each row, column and diagonal.
3. Enter formulae to calculate the total of each row.
   Enter formulae to calculate the total of each column.
   Enter formulae to calculate the total of each diagonal.
   (*sheet* 6)
4. Complete the magic square by entering the missing numbers.
5. Close the file (*sheet* 4).

Answers on page 23.

Using a Spreadsheet – Section 1 Task 3

Comparing Prices

1. Open the file **Prices.**

2. The spreadsheet shows prices of certain items at three different supermarkets.

   (a) How much do cornflakes cost at Food Giant?

   (b) How much does butter cost at Asda?

3. Complete the spreadsheet by entering the following costs for items bought at Tesco.

   All costs must be entered as pounds (£), so 73p is entered as 0.73. Ignore the £ and p signs when you enter the numbers:

large brown loaf	64p
milk	30p
butter	61p
baked beans	29p
cornflakes	£1.45
orange juice	59p
teabags	£3.15
tomato soup	23p

4. Enter a formula in E17 to calculate the total cost at Tesco (*sheet 7 - To add a range of cells*). Your spreadsheet should show a total of 7.26.

5. Format the numbers in column E to currency (*sheet 8*).

6. Use the spreadsheet to answer these questions:

   (a) Where is orange juice the cheapest?

   (b) Which shop is the cheapest if you want to buy everything at the same place?

   (c) How much do you save by buying each item at the shop where it is cheapest, rather than at the shop in question 6b?

7. Close the file.

Answers on page 23.

Using a Spreadsheet – Section 1 Task 4

Cherry Pie

1. Open the file **Cherry.**

2. The spreadsheet shows a recipe for cherry pie, with the ingredients given in metric units.

3. You want to use the recipe but your scales only weigh in imperial units. Use the spreadsheet to convert the recipe into imperial units, using the following conversions:

   28g = 1 oz
   30 ml = 1 fl.oz (fluid ounce)

4. Write down the recipe in imperial units rounding the quantities to whole numbers.

5. Check your recipe by formatting column C of the spreadsheet to display whole numbers (*sheet* 8).

6. Close the file.

Answers on page 23.

More Cherry Pie

You work in a restaurant. A new dessert, Cherry Pie, is to be introduced on the menu. You have been asked to work out the ingredients needed for 120 servings, and to calculate the cost of a single portion.

1. Open the file **Pie.**
2. The spreadsheet shows a recipe for a cherry pie which will serve eight people.
3. Enter a formula in D5 to calculate the amount of flour needed for 120 servings.
4. Copy the formula down the column to work out the quantities of the other ingredients (*sheet* 8).
5. Use column F to convert to kilos and litres the quantities needed for 120 servings (the labels are in column G). You need to do this because food costs in the restaurant are per kilo or per litre.
6. The cost of ingredients per kilo or per litre is given in column H. Use column I to work out the costs for 120 servings. Format the numbers in column I to Currency (*sheet* 8).
7. Enter a formula in I11 to calculate the total cost (*sheet* 7).
8. Enter a formula in I13 to calculate the cost per portion.
9. The menu price is worked out as three and a half times the cost price. Enter a formula in I15 to calculate the menu price.
10. How much is a portion of cherry pie on the menu?

Answers on page 23.

Task	Numeracy skills	Spreadsheet skills	Ideas for adapting or developing this task
What is the rule?			
Magic squares			
Comparing prices			
Cherry pie			
More cherry pie			

Task	Numeracy skills	Spreadsheet skills	Ideas for adapting or developing this task
What is the rule?	four rules, powers, square roots, order of operations, use of brackets, number patterns and sequences, strategies for problem-solving (choosing simple numbers to try out rules)	moving the cursor understanding cell references entering a number entering a formula	to simplify: concentrate on one operation, eg. addition, include examples of formulae, do not ask student to write down formulae to extend: more difficult examples; link to GCSE work, set up rules which involve two variables (place numbers in two columns and the rule in a third)
Magic squares	whole number addition and subtraction, problem-solving strategies (which square next?), refining estimations (if approach used is trial and error), simple formulae	entering a number entering a formula	develop through investigations of properties of magic squares, what happens if you add a constant to each number in the square? or multiply by a constant? use larger numbers in square, extend to 4 x 4 square
Comparing prices	expressing pence as pounds, reading information from tables, estimation (to check SUM formula is correct)	entering decimal numbers a range of cells adding numbers in a range (SUM) formatting to currency	to simplify: pre-format column to currency to extend: adapt file to allow student to enter minimum cost manually by comparing prices, let student enter MIN formula to calculate cheapest, conduct local survey and set up own spreadsheet
Cherry pie	devising formula for conversion given equivalence rounding to whole numbers	entering a formula copying a formula formatting to whole numbers	introduce ratios by doubling quantities, etc. devise exercises for conversion of other units eg. mm – inches (building trade, curtain material)
More cherry pie	ratio and proportion converting ml to litres, g to Kg selecting data for calculation, and devising formula fraction to decimal estimation (is answer sensible?)	entering a formula copying a formula formatting to currency	to simplify: convert recipe but leave out costing, give information for converting ml/l; g/Kg, change 3.5 to whole number, or give decimal, to extend: adapt spreadsheet to calculate for any number of servings, does this affect the menu price?

➤ Task 1: What is the rule?

	words	spreadsheet formula	maths formula (where n is any number)
Rule 1:	Add 7	C2 + 7	n + 7
Rule 2:	multiply by 2 or times by 2 or double	C5 * 2 or 2 * C5	2n
Rule 3:	subtract 6 or take away 6	C8 – 6	n – 6
Rule 4:	square the number or multiply by itself	C11^2	n^2 or n x n
Rule 5:	multiply by 2 and add 1 or double and add 1	2 * C14 + 1 or C14 * 2 + 1	2n + 1
Rule 6:	divide by 3	C17/3	$\frac{n}{3}$ or n ÷ 3

➤ Task 2: Magic Squares

Exercise 1:

4	3	8
9	5	1
2	7	6

Exercise 2:

11	18	13
16	14	12
15	10	17

➤ Task 3: Comparing prices

2a. £1.27
2b 61p
6a. Asda
6b. Food Giant
6c 14p

➤ Task 4: Cherry pie

8 oz flour
4 oz butter
24 oz cherries
20 fl.oz water
1 fl.oz apple juice

➤ Task 5: More cherry pie

A portion of cherry pie costs 99p

Section Two

➤ Aim

To consolidate spreadsheet skills and to explore the use of a spreadsheet to support topic-based work, using the example of consumer credit.

➤ Objectives

- to set up a spreadsheet to demonstrate a model of compound interest
- to work through a prepared exercise to compare different loan agreements
- to develop additional materials to prepare students for the spreadsheet exercises.

➤ Outline of section

- tasks 1 - 3: setting up a spreadsheet, compound interest, consumer credit
- evaluation
- task 4 - making materials
- trialling materials
- feedback.

➤ Skills checklist

The following computer skills will be practised or introduced. It is assumed that you are familiar with the numeracy skills listed.

Computer skills

- all from section 1
- create a new file
- format column width
- align cell contents
- fill series.

Numeracy topics

- percentages
- simple interest
- compound interest
- estimation
- loan
- credit
- interest rate
- APR.

➤ Materials needed

In addition to the materials in this book you will need:

- instruction sheets for Microsoft Works spreadsheet
- disk file: **credit**
- pen and paper.

➤ Numberpower

The tasks in this section link in to Numberpower at Stage One and Stage Two, Unit 2, Element 2: Selecting investment and credit arrangements.

➤ Procedure

The times indicated next to each heading are included as guidance for trainers using these materials to deliver a training course.

1. Introduction *5 mins*

- it is essential that you have completed section one of this course
- read through the introduction to this section to understand the aims and objectives.

2. Tasks 1 - 3 *1hr 30mins*

- work through tasks 1 - 3:
  - to create a spreadsheet to demonstrate a model of compound interest
  - to complete an exercise using the spreadsheet
  - to use a prepared spreadsheet to compare credit facilities
- instructions are provided to enable you to carry out the tasks - please read them!
- the task sheets refer to the instruction sheets
- answers are provided for the task of creating a spreadsheet; one shows the finished spreadsheet, another shows the formulae in the spreadsheet.

3. Evaluation 20 *mins*

When you have completed tasks 1 - 3 think about the following:

- what are the purposes of the exercises?
- what are the values of doing these exercises on a spreadsheet?
- would you ask students to create the file on compound interest themselves or just use a prepared one to answer questions?
- what preparatory work would be needed before students could undertake the exercises?

If possible discuss your ideas with a colleague who has completed these tasks. Compare your answers with those in the feedback on the next the page.

4. Task 4 45 *mins*

The task is to produce materials for students to prepare them for using the spreadsheet files.

5. Trialling materials 20 *mins*

- if you have undertaken this task within a group the materials can be shared and discussed
- if you have undertaken this task on your own ask a colleague to look at your materials before trying them out with students.

➤ Feedback

- what are the purposes of the exercises?
  - to demonstrate principle of compound interest
  - to demonstrate use of APR and length of repayment in comparing fixed credit facilities.

- what are the values of doing these exercises on a spreadsheet?
  - students can experiment with data
  - freedom from calculations enables students to focus on understanding concepts
  - useful practice in estimation skills
  - exercise on credit makes use of spreadsheet functions to calculate monthly repayments; this exercise would not be possible with pen and paper (in fact possible, but very complex).

  Note: *examples of revolving credit (eg. credit cards) cannot be used in this exercise because the repayments would not be fixed and would affect the interest charged.*

- would you ask students to create the file on compound interest themselves or just use a prepared one to answer questions?
  - this depends on the students, but setting up the spreadsheet is as much a spreadsheet exercise as a numeracy one, and may be regarded as inappropriate as a numeracy task.

- what preparatory work would be needed before students could undertake the exercises?
  - understanding percentages
  - how to enter a percentage into the spreadsheet (using % key, or as a decimal fraction)
  - how to use the percentage in a calculation in the spreadsheet
  - vocabulary and concepts (interest rates, APR, credit, etc.).

Setting up a Spreadsheet

This is an exercise to set up a spreadsheet file from scratch. The spreadsheet will demonstrate a model of compound interest, where a loan borrowed at a fixed monthly rate of interest is repaid in one year. This is what your spreadsheet will look like:

Loan:			time to pay: 12 months		
rate/month:					
	beg. month	interest	total owed	paid	end of month
January					
February					
March					
April					
May					
June					
July					
August					
September					
October					
November					
December					

1. Create a new file (*sheet* 3).

2. Select all cells and change the width of columns to 12 characters (*sheet* 9).

3a. Enter the following labels (*sheet* 5):

in A1	Loan:
in A2	rate/month:
in D1	time to pay:
in E1	12 months

3b. Format the labels in A1, A2 and D1 to align right; format the label in E1 to centre (*sheet* 9).

4a. Enter the following labels as column headings:

in B4	beg. month
in C4	interest
in D4	total owed
in E4	paid
in F4	end of month

4b. Format the labels in B4 to F4 to align right.

5. In cell A6 type Jan and press <Enter>. This will be shown in the cell as January. Select cells A6 to A17. From the Edit menu use the command Fill Series and select Month. Check that *Step by* is 1 (if not, type 1); press <Enter>. The names of the months from January to December should now be displayed in cells A6 to A17.

6. Cell B1 will be used to enter the amount of money borrowed (the loan); format this cell to currency (*sheet* 8).

7. Cell B2 will be used to enter the monthly interest rate. Format this cell to Percent to one decimal place (this means that a number will be shown as a percentage, but its value in a calculation will be a fraction out of a hundred. It also means that a percentage must be typed in either followed by a % symbol or as a decimal fraction, for example, type 2% or 0.02).

8. To complete the spreadsheet for January:

   a. Cell B6 needs to show the initial amount of money borrowed. Type the formula =B1 in this cell, so that the value to be entered in B1 will be copied into B6.

   b. Cell C6 needs to show the interest charged in the first month. Type the formula = B6 * B2. (Remember the number to be entered in B2 has already been formatted to percent, ie. divided by 100. This formula is equivalent to using the percentage key on a calculator, for example 2 % of £50 would be 50 x 2%; on the spreadsheet it would be 50 * 2 if 2 has already been formatted to Percent).

   c. Cell D6 needs to show the total amount owed. This is the initial loan plus the interest. Enter the formula =B6+C6.

   d. Cell E6 will show the monthly repayment. Leave this cell blank for now.

   e. Cell F6 needs to show the amount of money to be repaid at the end of the month. This is the total owed less the amount paid.
   Enter the formula =D6 – E6 (D6 minus E6; the minus sign is next to the = sign on the keyboard).

Answers on page 36.

9. To complete the spreadsheet:

   a. Cell B7 needs to show the amount owed at the beginning of February. This is the same as the amount owed at the end of January. Enter the formula =F6.

   b. The amount owed at the beginning of each month is the same as the amount owed at the end of the previous month, so copy the formula in cell B7 down the column (*sheet* 8). The program copies cells relatively so the formula =F6 automatically becomes =F7, =F8, =F9 etc.

   c. Column C calculates the interest each month. This is always the product of the amount owed at the beginning of the month (the number in column B) and the interest rate shown in cell B2. Because the interest rate is contained in a fixed cell (B2) the formula in cell C6 cannot be copied down the column (otherwise B2 would become B3, B4 etc). Complete column C by entering a formula in each cell.

   d. Column D shows the total amount owed each month. This is always the sum of the amount owed at the beginning of the month and the interest so the formula in cell D6 can be copied down the column.

   e. Column E shows the monthly repayment. It is assumed that the loan will be repaid in equal instalments so the same number needs to be shown each month. Enter the formula =E6 in cell E7. Copy this formula down the column. When a number is entered in cell E6 it will be placed in each cell down the column.

   f. Column F shows the amount owed at the end of each month. This is always the difference between the total owed and the amount paid, so the formula in cell F6 can be copied down the column.

   g. All the numbers in the main part of the spreadsheet are sums of money. Select cells B6 to F17 and format to currency.

10. Save the spreadsheet with the filename **interest** (*sheet* 4).

Answers on page 36.

Compound Interest

1. Open the file **interest.**

2. The spreadsheet enables you to investigate repayments of a loan over twelve months at a fixed rate of interest.

   Cell B1 will show the amount of money borrowed.
   Cell B2 will show the monthly interest rate.

   Note: Cell B2 has already been formatted to show a percentage. To enter a percentage EITHER type % at the end of the number OR enter the number as a decimal fraction; for example, type 1.5% OR 0.015.

3. Suppose you decide to borrow £2000 at a monthly interest rate of 1.9%. Enter this information into the spreadsheet.

4. Use the spreadsheet to discover how much you will need to pay back each month so that the loan is repaid by the end of the year. To do this guess at the amount and enter the number in cell E6. The number will be copied down the column and the figures in the spreadsheet will be recalculated automatically. Look at the sum in F17. What should this number be if the loan is repaid at the end of twelve months? Keep changing the number in cell E6 until you have discovered the amount to be paid each month.

5. How much will you pay back on a loan of £2000?

6. What will be the monthly repayment on a loan of £750 at a monthly interest rate of 2%?

7. What will be the monthly repayment on a loan of £5000 at a monthly interest rate of 1.6%?

8. Decide how much you could afford to pay back each month and use the spreadsheet to work out how much you can afford to borrow at an interest rate of 2% per month.

Answers on page 37.

Credit Facilities

1. Open the file **credit.**

2. This spreadsheet enables you to compare the total cost and monthly repayments of two different loan agreements. For each option you must enter the value of the loan, the APR (Annual Percentage Rate) and the time taken in months to repay the loan. The spreadsheet will calculate the monthly repayment and the total amount to be repaid over the chosen period. To enter the APR type a % symbol at the end of the number.

3. You want to borrow £1000 to buy a computer. You can buy the computer from a company who will arrange a loan for you at an APR of 24.9%. Or you can take out a personal loan with your bank at an APR of 21.6%. In each case the loan will be repaid in equal monthly instalments. Which is the better deal if you repay the loan in 12 months? What happens to the difference in the cost of the loans over two years? Three years? Four years?

4. You wish to buy a three-piece suite which costs £1000. One company offers a loan at an APR of 22.4% repayable in monthly instalments over five years. Another company offers a loan at an APR of 28.6% which can be repaid in monthly instalments over one, two, three, four or five years. If you can afford a maximum monthly repayment of £40, what is the best deal to choose?

5. What information do you need to consider when you compare credit facilities?

6. Why can't examples of revolving credit (for example, paying by credit card) be used in this spreadsheet exercise?

Answers on page 37.

Using a Spreadsheet – Section 2 Task 4

Making Materials

Your task is to develop materials to prepare students for the type of spreadsheet exercises which you have undertaken in this section.

Choose one of the following:

1. Consumer credit

Develop materials to help students to understand the vocabulary and concepts associated with consumer credit used in the spreadsheet exercises.

In addition to providing definitions you should aim to check understanding (through, for example, gap-filling exercises, sentence completion, etc.).

2. Percentages

Develop an exercise, or series of exercises, to help students to understand:

a. how to enter a percentage into the spreadsheet, and why this is necessary

b. how to use a percentage in a calculation in a spreadsheet.

(You might want to use the spreadsheet to compare numbers formatted and non-formatted to percent, or you might use comparisons with a calculator.)

➤ Setting up a spreadsheet

This is what your spreadsheet will look like:

Loan:			time to pay:	12 months	
rate/month:					
	beg. month	interest	total owed	paid	end of month
January	£0.00	£0.00	£0.00		£0.00
February	£0.00	£0.00	£0.00	£0.00	£0.00
March	£0.00	£0.00	£0.00	£0.00	£0.00
April	£0.00	£0.00	£0.00	£0.00	£0.00
May	£0.00	£0.00	£0.00	£0.00	£0.00
June	£0.00	£0.00	£0.00	£0.00	£0.00
July	£0.00	£0.00	£0.00	£0.00	£0.00
August	£0.00	£0.00	£0.00	£0.00	£0.00
September	£0.00	£0.00	£0.00	£0.00	£0.00
October	£0.00	£0.00	£0.00	£0.00	£0.00
November	£0.00	£0.00	£0.00	£0.00	£0.00
December	£0.00	£0.00	£0.00	£0.00	£0.00

This shows the formulae in the cells:

Loan:			time to pay:	12 months	
rate/month:					
	beg. month	interest	total owed	paid	end of month
January	=B1	=B1*B2	=B6+C6		=D6–E6
February	=F6	=B7*B2	=B7+C7	=E6	=D7–E7
March	=F7	=B8*B2	=B8+C8	=E7	=D8–E8
April	=F8	=B9*B2	=B9+C9	=E8	=D9–E9
May	=F9	=B10*B2	=B10+C10	=E9	=D10–E10
June	=F10	=B11*B2	=B11+C11	=E10	=D11–E11
July	=F11	=B12*B2	=B12+C12	=E11	=D12–E12
August	=F12	=B13*B2	=B13+C13	=E12	=D13–E13
September	=F13	=B14*B2	=B14+C14	=E13	=D14–E14
October	=F14	=B15*B2	=B15+C15	=E14	=D15–E15
November	=F15	=B16*B2	=B16+C16	=E15	=D16–E16
December	=F16	=B17*B2	=B17+C17	=E16	=D17–E17

➤ Compound interest

5.

Loan:	£2,000.00		time to pay:	12 months	
rate/month:	1.90%				
	beg. month	interest	total owed	paid	end of month
January	£2,000.00	£38.00	£2,038.00	£187.96	£1,850.04
February	£1,850.04	£35.15	£1,885.19	£187.96	£1,697.23
March	£1,697.23	£32.25	£1,729.48	£187.96	£1,541.52
April	£1,541.52	£29.29	£1,570.81	£187.96	£1,382.85
May	£1,382.85	£26.27	£1,409.12	£187.96	£1,221.16
June	£1,221.16	£23.20	£1,244.36	£187.96	£1,056.40
July	£1,056.40	£20.07	£1,076.47	£187.96	£888.51
August	£888.51	£16.88	£905.40	£187.96	£717.44
September	£717.44	£13.63	£731.07	£187.96	£543.11
October	£543.11	£10.32	£553.43	£187.96	£365.47
November	£365.47	£6.94	£372.41	£187.96	£184.45
December	£184.45	£3.50	£187.96	£187.96	£0.00

6. The monthly repayment on a loan of £750 at a rate of 2% is £70.92
7. The monthly repayment on a loan of £5000 at a rate of 1.6% is £461.26

➤ Credit

3. The bank loan is the better deal. The difference in the cost of the loans increases each year.
4. The best deal is the loan with an APR of 28.6% repaid over 3 years.
5. You need to know the APR and the time to repay; or the monthly repayment and the number of instalments.
6. You cannot use examples of revolving credit because the repayments are not fixed; they can vary from month to month.

Section Three

➤ Aim

To explore the potential of spreadsheets for the development of skills in reading information from charts, and to acquire the necessary skills to produce charts for students.

➤ Objectives

- to work through a prepared exercise to explore the charting possibilities of the spreadsheet
- to acquire the skills necessary to create charts from a table of figures in a spreadsheet
- to consider how exercises can be adapted for different levels of numeracy
- to evaluate this approach to using a spreadsheet to develop numeracy skills.

➤ Outline of section

- task 1 - using charts (diseases in the UK)
- evaluation
- task 2 - creating charts
- trialling materials
- evaluation and feedback.

➤ Skills checklist

The following computer skills will be practised or introduced. It is assumed that you are familiar with the numeracy skills listed.

Computer skills

- all from sections 1 and 2
- view chart
- create a new chart
- add a title
- rename a chart
- lock cells
- protect data.

Numeracy topics

- reading information from a bar chart
- reading information from a pie chart
- interpreting information from charts
- percentage change.

➤ Materials needed

In addition to the materials in this book you will need:

- disk files: **diseases, papers**
- instruction sheets for Microsoft Works spreadsheet
- pen and paper, or wordprocessing and printing facilities.

➤ Numberpower

The tasks in this section link in to Numberpower at Stage One and Stage Two, Unit 6: Interpreting and presenting numerical and graphical information taken from everyday situations.

➤ Procedure

The times indicated next to each heading are included as guidance for trainers using these materials to deliver a training course.

1. Introduction — 5 *mins*

- it is essential that you have completed sections one and two of this course
- read through the introduction to this section to understand the aims and objectives.

2. Task 1: Using charts — 25 *mins*

- work through task 1: diseases in the UK.

3. Evaluation

When you have completed the task think about the following:

- the ease of use of the program for viewing charts
- the quality of the charts
- what skills are being used in answering the questions
- how the exercise might be simplified for students
- how the exercise might fit into a programme of work.

4. Task 2: Creating charts *2 hrs*

You will work through a series of exercises designed to give you sufficient skills to create charts for use by students. It should be emphasised that these materials are written for tutors, not students.

5. Trialling materials

- if you have undertaken this task within a group the worksheets created in Exercise 7 of Creating Charts can be swapped and trialled within the group
- if you have undertaken this task on your own ask a colleague to look at your materials before trying them out with students.

6. Evaluation *30 mins*

- where would you file worksheets?
- how would these exercises integrate into a programme of work? how would you follow up the exercise?
- what additional materials would you need to prepare?
- why use a spreadsheet program for charts?
- what sort of data can be used to create charts?
- is it desirable that students learn how to create charts? What problems are involved?

If possible discuss your ideas with a colleague, before reading the answers in the feedback on the next page.

➤ Feedback

- how would you organise worksheets?
  - among numeracy resources in the appropriate skills/topic section.
- Why use a spreadsheet program for charts?
  - figures can be changed / updated and resulting changes in the chart can be seen straight away
  - several charts can be created from a single set of figures
  - tutors can use facilities to print out charts for paper-based exercises.
- What sort of data can be used to create charts?
  - it is essential that the figures entered into the spreadsheet are 'raw data'; that is the numbers counted, rather than results of analysis already carried out
  - the range of figures should not be too great otherwise the chart will not be easy to interpret unless logarithmic scales are used (too complex)
  - not too many items should be included, otherwise the charts will not be easy to interpret, especially pie-charts.

Diseases in the UK

- Open the file **disease.**

The spreadsheet shows the number of reported cases of notifiable diseases in the UK in the years 1986 to 1989.

It can be difficult to interpret information from a set of figures. For example, which disease is most common? Is it the same one in each year? Which disease is on the increase? Charts show the relationships between sets of figures and can be used to answer questions like these more easily.

1. Look at the chart called Bar Chart 86-89 (*Sheet* 10).

   This chart shows the number of reported cases of each disease in the years 1986-89. Which disease had the greatest number of cases reported in a single year?

2. Do you think this disease has the most number of cases reported in total for the four years?

   Check your answer by looking at the Stacked Bar Chart. This chart adds together the number of cases reported in each of the four years instead of showing them side by side. It is most useful for looking at totals over a period.

3. Go back to the Bar Chart 86-89.

   Which disease is on the increase? How can you tell by looking at the chart? Why do you think this disease is on the increase?

4. Which disease was most common in 1989? Can you tell from the bar chart?

   Look at the pie chart for 1989.
   Which of the two charts shows most clearly the comparisons in reported cases for a single year?

   You can also look at a pie chart for 1988.

Diseases in the UK

5. Go back to the Bar Chart 86-89.
Which diseases are fairly stable? How can you tell from looking at the chart?

6. Can you say anything about the pattern of reported cases of measles and whooping cough? What further information do you need to deduce a trend?

7. Look at the chart for whooping cough.

   This shows the number of reported cases from 1979 to 1989, taken from a table of figures further down the spreadsheet (you can use the down arrow cursor key to see these figures if you want to).

   Can you see a pattern?

   Whooping cough epidemics usually occur in four-year cycles. Does the graph support this theory?

   If this theory is correct what do you expect to have happened in 1990?

8. Go back and view the spreadsheet.

   Which of the diseases listed on the spreadsheet are not shown in the bar chart for 1986-89? Why do you think they have been left out of the chart?

9. Children can be immunised against a number of the diseases shown in this spreadsheet. Do you know which ones? If not, how can you find out?

Answers on page 49.

- Open the file **papers.**
- The spreadsheet shows the number of readers in millions of leading national newspapers in 1971 and 1989.

Exercise 1: To create a bar chart showing the readership figures for 1971 and 1989

1. Select the cells from A4 to C12 (*sheet* 7).
2. Create a new chart. This will be Chart 1 (*sheet* 10).
3. Change the X-series labels. The labels on the chart are the names of the newspapers in cells A5 to A12; some of these names are too long to fit on the chart. There are abbreviations in the cells H5 to H12 which will become the new X-Series labels (*sheet* 10).
4. Add the title: Readership of Newspapers 1971 & 1989 (*sheet* 11).
5. Format the chart for Black and White (optional - see *sheet* 11).
6. Save the file (use 'Save As' and choose a new name for your version - *sheet* 3).

Exercise 2: To create a pie chart showing the readership figures for 1971

1. Select the cells B5 to B12.
2. Create a new chart. This will be Chart 2. You will see a bar chart (*sheet* 10).
3. Add X-series labels to the chart, using the abbreviations in cells H5 to H12 (*sheet* 10).
4. Format the chart to a pie chart (*sheet* 11).
5. Add a suitable title to the chart (*sheet* 11).
6. Format for Black and White (optional - see *sheet* 11).
7. Save the file again with the same name (use **Save**).

Exercise 3: To create a pie chart for the readership figures in 1989

1. Follow the steps in exercise 2 to create a pie chart, using the figures in C5 to C12. This will be Chart 3.
2. Add a title to the chart.
3. Format the chart for Black & White (optional).
4. Save the file again with the same name.

Exercise 4: To create a chart to show the percentage change in readership from 1971 to 1989

1. Add a column to the spreadsheet to calculate percentage change:
   - return to spreadsheet view (*sheet* 10)
   - type **changes** in cell D4
   - enter the formula = (C5-B5)/B5 in cell D5
   - format the number in D5 to Percent with 0 decimal places
   - copy the formula in D5 to cells D6 to D12.
2. Select cells D5 to D12 and create a new chart. This will be Chart 4.
3. Add X-series labels to the chart, using the abbreviations in H5 to H12.
4. Add a title to the chart.
5. Format the chart for Black & White (optional).
6. Save the file again with the same name.

Exercise 5: Renaming the charts

1. Rename Chart 1: Bar Chart 71/89
   Rename Chart 2: Pie Chart 1971
   Rename Chart 3: Pie Chart 1989
   Rename Chart 4: Changes (*sheet* 11).
2. Look at each of the charts again.
3. Save the file again with the same name.

Exercise 6: Security

1. Return to spreadsheet view (*sheet* 10).

2. Protect the data in the spreadsheet (*sheet* 12).

   Note: all the cells in the spreadsheet are already locked - read **Locking cells** (*sheet* 12).

3. Save the file again with the same name.

Exercise 7: To create an exercise for students

1. Create a worksheet for students which uses the spreadsheet and charts which you have created.

   Your worksheet should not include instructions for using the spreadsheet; make a separate list of what instructions will be needed.

2. Ask someone to try out your task.

Task 1: Diseases in the UK

1. Measles, 1988.

2. Yes; you can see this clearly on the stacked bar chart which adds together numbers for the four years. Measles is clearly the tallest column.

3. Food poisoning is on the increase. The bar chart shows a steady increase in the height of the bar in consecutive years.

4. Food poisoning.

5. Tuberculosis, Dysentery, Scarlet Fever (although a noticeable increase in 1989). You can tell from the chart because there is little difference in the height of the bars for each year.

6. Up and down! To deduce a trend you would need information for many more years.

7. The graph does indicate an increase every four years, although the severity of the epidemic varies. If this theory is correct you would expect a high figure for 1990.

8. Polio, Typhoid, Diphtheria. They have been left out because the numbers are very low in comparison to other diseases, and on the scale of the graph, they would hardly show at all.

Section Four

➤ Aim

To use a spreadsheet for financial planning, and to create appropriate materials for students.

➤ Objectives

- to set up a spreadsheet
- to use the spreadsheet to make decisions
- to create an exercise for students.

➤ Outline of section

- task 1 - day trip
- solutions
- task 2 - making materials
- trialling materials
- evaluation and feedback.

➤ Skills checklist

The following computer skills will be practised. It is assumed that you are familiar with the numeracy skills listed.

Computer skills

- all from sections 1 and 2.

Numeracy topics

- budgeting
- fixed / variable costs
- profit / loss
- making decisions.

➤ Materials needed

In addition to the materials in this book, you will need:

- disk for saving spreadsheet files
- instruction sheets for Microsoft Works spreadsheet
- pen and paper, or wordprocessing and printing facilities.

➤ Numberpower

The tasks in this section link in to Numberpower at Foundation Level, Unit 2 and Stage One and Stage Two, Unit 3: Planning the use of money in everyday situations.

➤ Procedure

The times indicated next to each heading are included as guidance for trainers using these materials to deliver a training course.

1. Introduction *5 mins*

- it is essential that you have completed sections one and two of this course
- read through the introduction to this section to understand the aims and objectives.

2. Task 1 *50 mins*

- work through task 1: using a spreadsheet to plan a day trip.

3. Solutions *15 min*

- if you have undertaken this task within a group you can discuss your solutions within the group
- if you have done this task on your own, check with the answer sheet.

4. Task 2 *1hr 20mins*

- read through task 2: making materials
- prepare materials for one of the suggested activities, or use your own idea.

5. Trialling materials *20 mins*

- if you have undertaken this task within a group the materials created can be swapped and trialled within the group
- if you have undertaken this task on your own ask a colleague to look at your materials before trying them out with students.

6. Evaluation 10 *mins*

- what is the benefit of using a spreadsheet for this type of activity?
- how can these types of exercises be extended?

If possible, discuss your ideas with a colleague before reading through the feedback.

7. Feedback

- what is the benefit of using a spreadsheet for this type of activity?
  - information can be changed easily, allowing students to explore consequences of different decisions
- how can these types of exercises be extended?
  - introduce more costs, both fixed and variable
  - students to initiate task, find out information based on real circumstances and plan an event.

Day Trip

You are a member of a small group planning an end-of-term day-trip for staff and students. A forty-seater coach and driver can be hired for the day for £300. The cost of the trip will include lunch at £3.50 per head. If the coach is full it is easy to calculate the cost per person, but what if it is not? You cannot afford to make a loss (it would have to come out of your own pocket), but if you make a profit it can be put towards much-needed resources for students. However, you don't want to charge more than is necessary as it will put people off.

- Set up a spreadsheet to show the costs for different numbers of tickets sold.
- Use the column headings: tickets, charge, takings, coach, lunch, costs, profit where tickets is the number of tickets sold, charge is the cost of the trip per person (you can try different values for this), coach is the coach hire (£300), lunch is the total cost of lunch, and costs is the sum of coach hire and lunch costs.
- Start off with five rows showing the costs for 0, 10, 20, 30 and 40 tickets sold. Your spreadsheet should look like this:

tickets	charge	takings	coach	lunch	costs	profit
0						
10						
20						
30						
40						

- Complete the spreadsheet by entering values and formulae.

1. What will the charge be for each person if the coach is full?
2. What is the minimum you can charge if the coach is only half full?

The problem is that you must decide on how much to charge in order to advertise the event before you know how many tickets you will sell.

- Expand the spreadsheet between the rows showing 30 and 40 tickets sold to include costs for 31, 32, 33, etc. up to 40.

Day Trip (continued)

3. If you charge £12.60 per person how many tickets must you sell?

4. If you sell 36 tickets how much money will you make?

5. Decide how much you think should be charged. Produce reasons and figures to support your decision.

6. Suppose the planning group cannot accept your proposal and asks you to keep the cost down to £10 per person. What solutions would you propose?

Answers on page 58.

Prepare an exercise for students which will:

- require use of a spreadsheet to explore the costs involved in a particular activity
- include both fixed and variable costs
- require students to make decisions based on their figures.

The activity should fulfil one of the following:

- aim to make a profit - how much can be charged?
- keep spending within a fixed budget - explore the alternatives.

Choose one of the activities below, or use your own idea.

1. plan a fundraising event (disco, dance, party).
   the hire of the disco or band will be the fixed cost.
   refreshments included in the price of a ticket will be the variable cost.

2. plan a social event (wedding reception, birthday party):
   room hire will be the fixed cost,
   food and drink will be the variable cost.

3. plan a holiday to be provided for local children by a community group:
   travel will be the fixed cost,
   food and accommodation, outings and spending money will be the variable costs.

Think about:

- the information you will provide
- the information you will expect students to find (where will they find it?)
- the problems you will present
- the decisions you will ask students to make
- who will set up the initial spreadsheet, you or the student?
- the spreadsheet instructions needed to carry out the task.

Set up the spreadsheet yourself to help you formulate sensible questions, and to check that your materials work.

Day trip

This shows the formulae in the cells:

	tickets	charge	takings	coach	lunch	costs	profit
	0	11	=A3*B3	300	=A3*3.5	=D3+E3	=C3–F3
	10	=B3	=A4*B4	=D3	=A4*3.5	=D4+E4	=C4–F4
	20	=B4	=A5*B5	=D4	=A5*3.5	=D5+E5	=C5–F5
	30	=B5	=A6*B6	=D5	=A6*3.5	=D6+E6	=C6–F6
	40	=B6	=A7*B7	=D6	=A7*3.5	=D7+E7	=C7–F7

1. If the coach is full the charge will be £11.00
2. If the coach is only half full the minimum charge will be £18.50
3. If you charge £12.60 you must sell 33 tickets.
4. If you sell 36 tickets you will make £27.60

tickets	charge	takings	coach	lunch	costs	profit
0	£12.60	£0.00	£300.00	£0.00	£300.00	–£300.00
10	£12.60	£126.00	£300.00	£35.00	£335.00	–£209.00
20	£12.60	£252.00	£300.00	£70.00	£370.00	–£118.00
30	£12.60	£378.00	£300.00	£105.00	£405.00	–£27.00
31	£12.60	£390.60	£300.00	£108.50	£408.50	–£17.90
32	£12.60	£403.20	£300.00	£112.00	£412.00	–£8.80
33	£12.60	£415.80	£300.00	£115.50	£415.50	£0.30
34	£12.60	£428.40	£300.00	£119.00	£419.00	£9.40
35	£12.60	£441.00	£300.00	£122.50	£422.50	£18.50
36	£12.60	£453.60	£300.00	£126.00	£426.00	£27.60
37	£12.60	£466.20	£300.00	£129.50	£429.50	£36.70
38	£12.60	£478.80	£300.00	£133.00	£433.00	£45.80
39	£12.60	£491.40	£300.00	£136.50	£436.50	£54.90
40	£12.60	£504.00	£300.00	£140.00	£440.00	£64.00

6. Possible solutions to keeping cost to £10
   - book cheaper lunch
   - do not provide lunch - bring own sandwiches
   - everyone to buy their own lunch
   - find cheaper coach.

Further copies are available from:
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The Basic Skills Unit

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BEST COPY AVAILABLE

USING A WORDPROCESSOR TO DEVELOP LITERACY SKILLS

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Introduction

Aims of the pack

IT and Basic Skills provides learning materials and guidance notes for two separate training courses in the use of computers to develop basic skills:

- Using a wordprocessor to develop literacy skills
- Using a spreadsheet to develop numeracy skills.

Each course is divided into four sections.

Contents of the pack

- Using a wordprocessor to develop literacy skills (this book)
- Instructions for Microsoft Works wordprocessor
- Using a spreadsheet to develop numeracy skills
- Instructions for Microsoft Works spreadsheet
- One disk.

Who is the pack aimed at?

The materials are intended for tutors teaching basic skills in a variety of settings: Adult Education Centres, Open Learning Centres, Community Colleges, Colleges of FE, Training Organisations, the Prison Education Service etc.

The pack can be used as self-access by individuals; however, tutors with no previous experience in using a computer are strongly advised to seek assistance in getting started with the materials. All tutors will benefit from discussing the issues raised and sharing ideas with colleagues.

The materials can also be used to deliver two separate training courses over four sessions each. In this case each course should be led by a trainer with some expertise in using a wordprocessor or spreadsheet and sound knowledge of basic skills teaching.

Using Microsoft Works

The pack is designed to be used with Microsoft Works (MS DOS) (versions 2 or 3) or Microsoft Works for Windows (version 2). The program is not supplied with this pack.

Microsoft Works is an integrated package (wordprocessor, spreadsheet, database) for IBM PC compatible computers. The DOS version will also run under a PC emulator on Acorn Archimedes (check with your dealer for machine specification) and RM Nimbus PC -186 (Nimbus firmware version 1.32D or later is required).

Using the materials

Aims of the course

To promote good practice in the use of the wordprocessor to develop language and literacy skills by demonstrating and providing practice for an integrated approach.

How the course is organised

The course is organised in four sections. Notes at the beginning of each section include aims and objectives, an outline, skills checklist and procedural guidance on using the materials.

The materials consist of tasksheets, which follow the section notes, and answer sheets. The tasksheets refer to disk files which are provided on floppy disk, and instruction sheets for operating Microsoft Works which are in a separate book. The course materials are designed for tutors, and provide a model for work with students.

After completing each section you are advised to practise and consolidate computer skills before progressing to the next section.

Essential resources

Each of the sections involves hands-on activities at the computer. A copy of Microsoft Works is needed, either installed on the hard disk, or available on a floppy disk.

Delivering training

If you are using these materials to deliver a training course the section notes should help you to plan each session. You are strongly advised to work through the materials yourself prior to training.

It is recommended for most activities that trainees work in pairs at the computer as the discussion generated contributes significantly to increasing awareness and understanding of an integrated approach. A group of three trainees is preferable to a trainee working alone.

City and Guilds 9285

This course will assist tutors who are working towards ALBSU/City and Guilds Certificate in Teaching Basic Skills 9285. Unit C7: Support the use of information technology, Elements C1 and C2, may be addressed with reference to using a wordprocessor.

Using the disk files – Works 2 and 3 (MS DOS)

Files

Wordprocessing and spreadsheet files are provided on one floppy disk. The wordprocessing files are stored in a directory called WPTASKS. Wordprocessing files are identified by the file extension .WPS.

Hard disk

If Microsoft Works is installed on a hard disk in a directory called WORKS:

- create a subdirectory of the WORKS directory called WPTASKS

  from C:> type: cd works<Enter>
  from C:\works type: md wptasks<Enter>
  type: cd wptasks<Enter>

- copy the wordprocessing files from the floppy disk to the directory called WPTASKS on the hard disk

  from C:\works\wptasks type: copy A:\wptasks*.wps

Note: the pathname for the wordprocessing files will be:

C:\works\wptasks\<filename>

If Microsoft Works is in a directory called something other than WORKS, replace WORKS in the instructions above with the appropriate directory name.

One floppy disk drive

If you are running Microsoft Works from a single floppy disk you will need to swap the program disk and the disk with the files on in order to open the wordprocessing files.

Note: the pathname for the wordprocessing files will be:

A:\wptasks\<filename>

Two floppy disk drives

If you have two floppy disk drives you can run Microsoft Works in drive A: and open the files from a disk in drive B.

Note: the pathname for the wordprocessing files will be:

B:\wptasks\<filename>

Using the disk files – Works for Windows

Works for Windows

You cannot run Microsoft Works for Windows from a floppy disk; it must be installed on a hard disk which runs Microsoft Windows.

Files

Wordprocessing and spreadsheet files are provided on one floppy disk. The wordprocessing files are stored in a directory called WPTASKS (the same files work with both DOS and Windows). Wordprocessing files are identified by the file extension .WPS.

Hard disk

To install the wordprocessing files on a hard disk (if you are not familiar with Windows, get someone to do this for you):

- create a subdirectory of the MSWORKS directory called WPTASKS

  from Windows Program manager load File manager
  highlight the MSWORKS directory
  from the file menu select 'create directory' and type WPTASKS.

- copy the wordprocessing files from the floppy disk to the directory called WPTASKS on the hard disk:

  use File manager to copy the files from a:WPTASKS to c:\MSWORKS\WPTASKS.

If Microsoft Works for Windows is in a directory called something other than MSWORKS, replace MSWORKS in the instructions above with the appropriate directory name.

Floppy disk

You can open the files from floppy disk without installing them on the hard disk. The wordprocessing instructions with this pack will tell you how to do this.

Note: the pathname for the wordprocessing files will be:

a:\wptasks\<filename>

Section One

➤ Aim

To demonstrate and practise an integrated approach to the use of the wordprocessor to develop language and literacy skills.

➤ Objectives

- to ensure an understanding of basic computer terminology
- to work through prepared exercises and analyse language/literacy and wordprocessing skills learnt or developed
- to acquire basic wordprocessing skills
- to consider how exercises can be adapted for different subject areas and levels of literacy.

➤ Outline of section

- health and safety
- computer vocabulary
- five literacy/language wordprocessing tasks
- evaluation.

➤ Skills checklist

The following computer skills will be introduced. It is assumed that you are familiar with the literacy skills listed.

Computer skills

- load the program
- open a file
- close a file
- save a file
- print a file
- move the cursor
- use <Enter>
- use shift to make a capital letter
- insert and delete a character
- select text
- delete text
- typing replaces selection
- move text.

Language and literacy

- sentence stress, rhythm
- spelling sounds
- punctuation
- extending vocabulary
- grammar – past tense
- sequencing.

➤ Materials needed

In addition to the materials in this book you will need:

- instruction sheets for Microsoft Works wordprocessor
- disk files: **poem, film, house, beef, morning.**

➤ Procedure

The times indicated next to each heading are included as guidance for trainers using these materials to deliver a training course.

1. Introduction *5 mins*

- make sure you have read through the introductory section to the course
- read through the introduction to this section to understand the aims and objectives.

2. Health and safety *5 mins*

- take a break from the screen whenever you feel the need, either by looking away, or moving away
- you cannot damage hardware or software by use and experimentation; the worst you can do is lose your own work
- equipment can be damaged by spillage of drink or crumbs of food - keep them away from the computer.

3. Computer vocabulary *20 mins*

- work through the computer vocabulary exercise.

4. The tasks *2 hrs*

- there are five tasks - work through them at your own pace
- instructions are provided to enable you to carry out the tasks - please read them!
- the tasksheets refer to the instruction sheets - work from the tasksheets and refer to the instructions as needed
- the tasksheets direct you to save and print - you will need to know where to save ie. in a directory on the hard disk or to floppy
- complete the record sheet provided after each task - make brief notes on the language skills practised, the wordprocessing skills introduced, and how the exercise might be adapted, simplified or extended for different levels of language skills, or for different topics.

Note: Getting started is the most difficult part. If you have not used a computer before you are advised to seek help with this section.

5. Evaluation *30 mins*

Think about the purpose of the activities you have completed and the implications for work with students. If possible discuss your ideas with a colleague.

- for each task you will have used the record sheet to:
  - analyse skills
  - think about ideas for adapting or developing the task.

  Compare your notes with the completed record sheet provided.

Computer Vocabulary

Fill in the gaps with a word from the list below, then check your answers on the next page.

1. ..... is a key on the keyboard, found at the right hand side, sometimes called Return, and often used to tell the computer to carry out an action.

2. A..... can be dot matrix, laser, inkjet, black and white or colour. It provides hard (paper) copy.

3. ..... is the name given to all the physical parts of a computer: screen, keyboard, printer and so on.

4. ..... is the general word for all the programs and applications that run on a computer.

5. ..... is the name of a key that does nothing on its own and is always used with another key.

6. The..... provides the means to give information to the computer using different keys.

7. The..... provides the means to move a pointer on screen and to give information to the computer by clicking its buttons.

8. The..... lights up when switched on, as a television does.

9. The..... is the piece of equipment that holds the screen.

10. A..... is a series of instructions contained on disk, which tell the computer what to do next.

11. A..... is where you put a disk so that the computer can read it.

12. A..... may be part of the main computer (internal) or an add-on unit (external). It is a storage space and can store much more information than a floppy disk.

13. There are two ..... keys, one at each side of the keyboard. They can be used to make capital letters.

14. A..... is either 3.5" or 5.25". The larger ones are in a soft case and not very robust. The smaller ones are encased in plastic and therefore much stronger.

15. A..... tells the computer what to do and can be given in different ways. Older technology often requires you to type these in. Recent developments rely much more on choosing from a menu.

enter	mouse	control	command	hard disk
hardware	software	printer	shift	keyboard
screen	monitor	floppy disk	program	disk drive

➤ Computer Vocabulary - Answers

1. enter
2. printer
3. hardware
4. software
5. control
6. keyboard
7. mouse
8. screen
9. monitor
10. program
11. disk drive
12. hard disk
13. shift
14. floppy disk
15. command

➤ How did you score?

0 It seems that all the joy of learning about computers is ahead of you. You will probably need some help to get started using this training pack.

1-5 You have some very basic knowledge of computers but may need some help getting started with the training pack.

6-10 Just a few things to sort out, you should be able to start on the pack with no problems.

11-15 The technical side will hold no fears for you. This means that you can concentrate on the basic skills.

Poem

1. Load Microsoft Works (*instruction sheet* 1).

2. Open the file **poem** (*sheets* 1 *and* 2).

3. Practise moving the cursor over the text until you are familiar with the different methods of movement (*sheet* 5).

4. The poem is shown as continuous text; your task is to break the poem into lines. Place the cursor where you want a new line to begin and press <Enter>.

Note: Some of the capital letters in the original have been changed to lower case, for the purpose of this exercise. There is no need to replace them.

5. Save your text using a new name (*sheet* 3).

6. Print your text (*sheet* 4).

7. Close the file (*sheet* 4).

➤ The Health-Food Diner

No sprouted wheat and soya shoots and Brussels in a cake, carrot straw and spinach raw, (today, I need a steak). Not thick brown rice and rice pilau or mushrooms creamed on toast, turnips mashed and parsnips hashed, (I'm dreaming of a roast). Health-food folks around the world are thinned by anxious zeal, they look for help in seafood kelp (I count on breaded veal). No Smoking signs, raw mustard greens, zucchini by the ton, uncooked kale and bodies frail are sure to make me run. Loins of pork and chicken thighs and standing rib, so prime, pork chops brown and fresh ground round (I crave them all the time). Irish stews and boiled corned beef and hot dogs by the scores, or any place that saves a space for smoking carnivores.

From "And Still I Rise", a selection of poems by Maya Angelou published by Virago Press.

Answers on page 20.

Film

1. Open the file **film** (*sheet* 1).

2. This text has no capital letters. Change letters to capitals where needed (*Delete and Insert - sheets 6 and 7*).

3. Save and print your text (*sheets 3 and 4*).

4. Close the file (*sheet 4*).

➤ **Film**

readers are invited to a special london preview screening of the acclaimed new french feature, c'est la vie, directed by diane kurys, whose previous films include peppermint soda and coup de foudre. set in lyon in 1958, the story is told from the point of view of 13 year old frederique and her 6 year old sister, sophie, as they set out for their summer holiday at la baule le pins.

Answers on page 20.

House

1. Open the file **house** (*sheet* 1).

2. There are too many adjectives in this text. Select and delete the unnecessary words (*sheet* 6).

3. Continue the text with a short paragraph of your own.

4. Save and print the text (*sheets* 3 *and* 4).

5. Close the file (*sheet* 4).

➤ A House of Secrets

It was a huge, large, old house with a broad, wide, overgrown drive sweeping up to the front door. On either side of the drive were tall, high, towering poplar trees, which stood, as they had for many years, as though guarding a hidden secret.

The front door, despite peeling paint, was grand, imposing and secure. On either side of the door the dark green, climbing ivy spread out to cover the wall and partly obscure the dirty, grimy windows.

Answers on page 21.

Beef

1. Open the file **beef.**
2. Use *Typing Replaces Selection* to replace the asterisks with a suitable word (*sheet 7*).
3. Save and print the text.
4. Close the file.

➤ A Poorly Cat

One hot summer day in 1990, Mr. and Mrs. Jones ... down to tea. They had their favourite, corned beef salad. After tea Mrs. Jones rushed off to see her sister and forgot to put the rest of the corned beef away in the fridge. Mr. Jones ....., too.

The next morning Mrs. Jones was ..... her husband's sandwiches for lunch. She was a bit doubtful about the corned beef, but it ..... all right so she made the sandwiches and gave the rest to the cat.

Later, the cat came in looking very ill indeed. Its legs .... wobbly and its eyes were glazed. "Oh no! The corned beef!" thought Mrs. Jones. She immediately ..... her husband at work, but it was too late, he had just had his lunch. They ..... the doctor, who ..... it best that he went to hospital and had his stomach pumped.

Mr. Jones was not a happy man that evening. The next day, the milkman came to ..... his money. "And how's that cat of yours today?" he asked. "Why? How did you know it was ill?" said Mrs. Jones, "I ..... a milk bottle on its head yesterday morning!" the milkman .....

Answers on page 21.

Morning

1. Open the file **morning.**
2. The text is in the wrong order. Move the paragraphs into the correct order (*sheet* 7).
3. Save and print the text.
4. Close the file.

➤ Morning

I shower, throw on my old dressing gown and go downstairs.

The alarm goes off at 6.45a.m.

At this stage every morning I wish I was organised enough to prepare their clothes the night before.

How I enjoy those few minutes collecting myself before my day explodes in a flurry of activity and noise.

I instantly jump out of bed, knowing that delay could be fatal.

This is very sensible on her part as it means she gets peace to wash and dress, followed by a quiet breakfast.

At about 7.10 I call the children.

At about 7.50 their mother appears, just as the children finish their breakfast and wander off to do morning jobs like feed the fish or lose their sports shoes.

The first thing is coffee, which I drink before preparing the breakfast table.

Somehow they get washed and dressed and downstairs to grumble over the cornflakes, which are never the right sort.

Very soon, though, the day really begins.

Answers on page 22.

Task	Which language/literacy skills are being developed?	Which computer skills are being reinforced and/or introduced	How can this activity be used at different language levels and in other subject areas?
1. Poem			
2. Film			
3. House			
4. Beef			
5. Morning			

Tasks	Which language/literacy skills are being developed?	Which computer skills are being reinforced and/or introduced	How can this activity be used at different language levels and in other subject areas?
1. Poem	Homophones Spelling sounds Rhythm – important for ESOL as word and sentence stress is different in English from other languages	Use of cursor keys Use of <enter> Use of backspace delete key (possibly)	Use any text which occurs naturally in a list eg. a shopping list or instructions. These can be at different language levels. Use any text which has paragraphs. This could be a text for advanced readers, or from students' writing.
2. Film	Punctuation – capital letters	Use of shift key for upper case Delete and insert character	Any punctuation exercise at any level. One text can be used for several different punctuation exercises, eg. the full stops can be deleted for one exercise, the capital letters for another, both capitals and full stops for a third and so on.
3. House	Vocabulary extension – adjectives Style – writing descriptions	Delete a word	Any task at any level where a choice of word needs to be made eg. to too two, tenses, homophones, formal/informal.
4. Beef	Regular and irregular verbs in the past Prediction in reading	Insert and Overtype Modes NB. Point out the dangers of Typing Replaces Selection or Overtype Mode – it is easy to lose the original	Cloze exercises (where every nth word is taken out) at any level can be used for developing prediction skills and using contextual clues, Gap-fill exercises (where selected words are removed) can focus on different aspects of language – spelling, grammar, vocabulary, style.
5. Morning	Sequencing – using time references and contextual clues to reorder the text	Select and move blocks of text Moving through a document (Page Up/Page Down) if the text is over more than one screen	Any text at any level which provides sufficient contextual clues can be used. At a basic level days and months could be ordered; at more advanced level a suitable longer text could be used.

➤ Task 1: Poem

The Health-Food Diner

No sprouted wheat and soya shoots
And Brussels in a cake,
Carrot straw and spinach raw,
(Today, I need a steak).

Not thick brown rice and rice pilau
Or mushrooms creamed on toast,
Turnips mashed and parsnips hashed,
(I'm dreaming of a roast).

Health-food folks around the world
Are thinned by anxious zeal,
They look for help in seafood kelp
(I count on breaded veal).

No Smoking signs, raw mustard greens,
Zucchini by the ton,
Uncooked kale and bodies frail
Are sure to make me run.

Loins of pork and chicken thighs
And standing rib, so prime,
Pork chops brown and fresh ground round
(I crave them all the time).

Irish stews and boiled corned beef
and hot dogs by the scores,
or any place that saves a space
For smoking carnivores.

From "And Still I Rise", a selection of poems by Maya Angelou published by Virago Press.

➤ Task 2: Film

Readers are invited to a special London preview screening of the acclaimed new French feature, C'est La Vie, directed by Diane Kurys, whose previous films include Peppermint Soda and Coup de Foudre. Set in Lyon in 1958, the story is told from the point of view of 13 year old Frederique and her 6 year old sister, Sophie, as they set out for their summer holiday at La Baule le Pins.

➤ Task 3: House

A House of Secrets
It was a (huge,) large, old house with a broad,(wide,) overgrown drive sweeping up to the front door. On either side of the drive were tall, (high,) (towering) poplar trees which stood, as they had for many years, as though guarding a hidden secret.

The front door, despite peeling paint, was (grand,) imposing and secure. On either side of the door the dark green, climbing ivy spread out to cover the wall and partly obscure the (dirty,) grimy windows.

NB. Words in brackets could be the ones deleted, but there are other possibilities.

➤ Task 4: Beef

A Poorly Cat
One hot summer day in 1990, Mr. and Mrs. Jones sat down to tea. They had their favourite, corned beef salad. After tea Mrs. Jones rushed off to see her sister and forgot to put the rest of the corned beef away in the fridge. Mr. Jones forgot, too.

The next morning Mrs. Jones was making her husband's sandwiches for lunch. She was a bit doubtful about the corned beef, but it smelled all right so she made the sandwiches and gave the rest to the cat.

Later, the cat came in looking very ill indeed. Its legs were wobbly and its eyes were glazed. "Oh no! The corned beef!" thought Mrs. Jones. She immediately phoned her husband at work, but it was too late, he had just had his lunch. They called the doctor, who thought it best that he went to hospital and had his stomach pumped.

Mr. Jones was not a happy man that evening. The next day, the milkman came to collect his money. "And how's that cat of yours today?" he asked. "Why? How did you know it was ill?" said Mrs. Jones, "I dropped a milk bottle on its head yesterday morning!" the milkman replied.

➤ Task 5: Morning

The alarm goes off at 6.45a.m. I instantly jump out of bed, knowing that delay could be fatal. I shower, throw on my old dressing gown and go downstairs. The first thing is coffee, which I drink before preparing the breakfast table. How I enjoy those few minutes collecting myself before my day explodes in a flurry of activity and noise. Very soon, though, the day really begins. At about 7.10a.m. I call the children. At this stage every morning I wish I was organised enough to prepare their clothes the night before. Somehow they get washed and dressed and downstairs to grumble over the cornflakes, which are never the right sort. At about 7.50a.m. their mother appears, just as the children finish their breakfast and wander off to do morning jobs like feed the fish or lose their sports shoes. This is very sensible on her part as it means she gets peace to wash and dress, followed by a quiet breakfast.

Section Two

➤ Aim

To develop and practise an integrated approach to the use of the wordprocessor in the development of literacy/language skills.

➤ Objectives

- to work through prepared tasks and analyse language/literacy skills learnt or developed
- to develop wordprocessing skills
- to consider how exercises can be adapted for different literacy levels and subject areas
- to create an effective task for introducing students to the wordprocessor
- to consider implications for materials preparation.

➤ Outline of section

- 3 tasks - vocabulary, spelling and letter writing
- feedback
- devising a task to introduce students to the wordprocessor
- evaluation.

➤ Skills checklist

The following computer skills will be practised or introduced. It is assumed that you are familiar with the literacy skills listed.

Computer skills

- all from section 1
- format character: bold, underline etc.
- format paragraph: left, right, centre, justify.

Language and literacy

- vocabulary
- letter writing
- spelling.

➤ Materials

In addition to the materials in this book you will need:

- instruction sheets for Microsoft Works wordprocessor
- disk files: **market, letter.**

➤ Procedure

The times indicated next to each heading are included as guidance for trainers using these materials to deliver a training course.

1. Introduction *5 mins*

- it is essential that you have completed section one of this course
- read through the introduction to this section to understand the aims and objectives.

2. The tasks *1 hr*

- work through tasks 1 - 3:
  - market - extending vocabulary
  - letter - writing letters
  - spelling.

- make notes after each task on:
  - the language/literacy and computer skills needed to perform the task
  - the language/literacy and computer skills acquired or developed.

3. Feedback *30 mins*

Think about the purpose of the activities you have completed and the implications for work with students. If possible discuss your ideas with a colleague, before comparing with the notes below.

- Task 1 - vocabulary (refer to tasksheet)

  - suggestions for finding meaning of words:
    discuss with another student
    use a dictionary
    ask a tutor
  - the language skills developed are:
    using contextual clues to discover meaning
    using reference material eg. dictionaries.
  - the computer skill acquired is character formatting which is needed for presentation of material
  - similar activities can be used for a wide range of vocabulary, but texts need to contain contextual clues.

- Task 2 - letter writing (refer to tasksheet)

  - language skills - proofreading
  - writing skills - layout
  - new computer skill - paragraph formatting (align left, right, justify etc.)
  - letters from existing materials can be used to create a wide range of exercises.

- Task 3 - ideas for spelling activities:

  - many existing worksheets can be adapted for the wordprocessor

  - ideas for words in context:
    - gap-fill
    - multiple choice
    - matching

  - activities for words in isolation:
    - type words, correct and save
    - delete a letter from each word, student replaces it
    - put in alphabetical order
    - put in columns
    - break up into syllables
    - copy so each word appears four times on the screen, then delete
    - spread the words around the screen, then put them back on one line.

Note: all these activities are simply manipulating the words on screen using a range of wordprocessing features, but constantly looking at the words helps to get them into long term memory.

5. Task: first introduction to the wordprocessor *1 hr*

- read through tasksheet (Task 4)
- assume that students have some basic knowledge of the computer - this task is to be an introduction to the wordprocessor, not necessarily an introduction to the computer
- consider language aims and computer skills
- consider presentation, clarity of instructions, layout, upper or lower case, etc.
- when the file is completed, try it out and make any necessary adjustments.

6. Evaluation *25 mins*

- if you have undertaken this task within a group the materials created can be swapped, trialled and discussed within the group
- if you have undertaken this task on your own ask a colleague to look at your materials before trying them out with students.

Think about the following issues surrounding the organisation of materials:

- how would you organise files such as these on disk?
- how would students know where they are?
- would students know what to do with them?
- do your solutions encourage independence on the part of the learner?

Market

1. Open the file **market.**

2. Read the text and

   - underline words you know, but would like to explore further
   - change to *italics* words you think you know, but are not sure of
   - change to **bold** words you have never seen or heard before (sheet 8).

3. Try to find out about the words you have chosen. How will you do this?

   If this was an exercise for your students, how would you suggest they find out about the words they don't know?

4. Go back to the text. Change the underlining, italics or bold text according to what you now know.

➤ A Market Scene

One day I decided to walk towards the market. As I rounded the corner I was astounded to see such a crowd of people, from so many countries. It was a noisy, colourful, bustling scene.

A man in his thirties, possibly Greek in origin, wore a white fustanella, which flew out as he danced. His partner wore a muumuu of such dazzling colour it was almost hurtful to the eye. Behind them was a tall older woman wearing a white guimpe and balmoral under her pinafore dress. She was fiercely arguing with a man in a domino, dressed as if for a masked ball.

Some wore historical costume. A fat, bare-chested man in green galligaskins was accompanied by a friend in doublet and hose.

Others wore Asian dress, the mystery of the chador, the comfort of the kimono contrasting sharply with the formality of the cheongsam and sherwani.

Answers on page 32.

Letter

1. Open the file **letter.**
2. Make corrections to the letter using the editing techniques you have learned.
3. Move the address and date to the right hand side of the page (*sheet* 9).
4. Centre the first line after Dear Mr. Johnson, and make it bold (*sheet* 9).
5. Justify the body of the letter (*sheet* 9).
6. Save and print the letter.

37 William Street
Ainsworth
Lincs
LA3 7TY

15 February, 1993

Dear Mr. Johnson

re: Theft claim M45721/OP

I am writeing to try to clarify the situation concerning my recent claim following the burglary at the above property on 13 november 1992.

I recieved your letter of 22 november 1992 stating that you would be visiting my home to discuss the claim. We agreed a date, 21 December, and a time, 10am. You did not appear and since that time I have repeatedly contactted your office to arrange a new appointment. You have been unavailable for the last two months and have not returned my calls.
This matter is now in the hands of my soliciter who will be contacting you soon.

Yours sincerely

M. Dickinson

Answers on page 32.

Spelling

The task is to devise ways to use the wordprocessor for spelling activities.

- Think of the paper worksheets in the spelling file at your resource base. Can any of these be adapted? Would they be useful? Would they work on a wordprocessor?
- Think of words in context. What kind of exercise is needed to practise these?
- Think of words in isolation (where meaning is clear to students). What can you do with a list of, say, ten words that the student has chosen to 'learn'?

NB. The outcome of this exercise will be ideas not finished tasksheets. You may want to experiment with the wordprocessor to see if your ideas are feasible.

- Using the typing and editing techniques you have learned, and formatting your text attractively, devise a simple first exercise to introduce students to the wordprocessor:

  - assume that students have some basic knowledge of the computer
  - make sure your language aims are clear
  - consider how many new computer skills will be needed to perform the task
  - think about presentation, clarity of instructions.

- Make a list of the instructions needed for the task.

- Save and print the files.

➤ Task 1: Market

Clothes Vocabulary (from Readers Digest Reverse Dictionary)
Fustanella: a ceremonial white pleated skirt as worn by some Greek soldiers
Guimpe: a blouse under a pinafore dress
Muumuu: a bright loose fitting Hawaiian dress
Domino: a hooded robe, worn at masked balls
Chador: a garment worn by Muslim women covering the upper body and part of the face
Cheongsam: a tight Chinese dress with a high collar and a slit skirt
Sherwani: an Indian man's high collared coat
Balmoral: a woollen petticoat showing below the skirt
Galligaskins: long, loose breeches 16-17 century

➤ Task 2: Letter

37 William Street
Ainsworth
Lincs
LA3 7TY

15 February, 1993

Dear Mr. Johnson

re: Theft claim M45721/OP

I am writing to try to clarify the situation concerning my recent claim following the burglary at the above property on 13 November 1992.

I received your letter of 22 November 1992 stating that you would be visiting my home to discuss the claim. We agreed a date, 21 December, and a time, 10am. You did not appear and since that time I have repeatedly contacted your office to arrange a new appointment. You have been unavailable for the last two months and have not returned my calls.

This matter is now in the hands of my solicitor who will be contacting you soon.

Yours sincerely

M.Dickinson

Section Three

➤ Aim

To demonstrate and practise the use of the wordprocessor as a tool for collaborative writing which develops specific literacy/language skills.

➤ Objectives

- to simulate group writing activities
- to merge files to produce a complete document
- to provide further example of group writing activities.

➤ Outline of session

- picture story - writing in a range of styles
- free writing - merging files
- feedback.

➤ Skills checklist

The following computer skills will be introduced. It is assumed that you are familiar with the literacy skills listed.

Computer skills

- all from sections 1 and 2
- merging files.

Language and literacy

- grammar - tenses
- writing styles
- paragraph writing.

➤ Materials

In addition to the materials in this book you will need:

- disk files: **para1**, **para3**
- instruction sheets for Microsoft Works wordprocessor.

➤ Procedure

The times indicated next to each heading are included as guidance for trainers using these materials to deliver a training course. If you are using these materials in a group training session, you may prefer to substitute Lesson Plan One for task 1.

1. Introduction — 5 *mins*

- it is essential that you have completed sections one and two of this course
- read through the introduction to this section to understand the aims and objectives.

2. Task 1 - Picture Story — 50 *mins*

- follow the instructions on the tasksheet.

3. Evaluation

- what is the purpose of this exercise?
- would you ask students to write in a variety of styles?

4. Feedback *20 mins*

- writing in a variety of styles demonstrates how picture stories can be used to develop writing at a range of levels and for different purposes.

- ideas for use

  with one computer:

  - split the whole group into three groups
  - allocate a part of the picture story to each group
  - each group plans their part of the story on paper
  - someone is chosen to work at the keyboard as typist - this could be the same person for all groups or a different one for each, depending on computer skills
  - each group 'dictates' their part of the story - at this stage, students would be encouraged to offer alternative suggestions
  - when the whole story is typed and printed, students compare the styles and suggest ways of improving the text.

  with two or more computers:

  - split the group into two or more smaller groups (pairs, threes or fours)
  - each group writes part or all the story from the pictures using the wordprocessor (each group could write in a different style)
  - print and compare.

  There are clearly many variations to the group dynamics that can be used. The main points to remember are:

  - make the typist's task as stress free as possible, give different students the chance to try
  - encourage lively discussion during composition and comparison stages.

5. Task 2 - merging files *45 mins*

- follow the instructions on the tasksheet
- if you are working in a group:
  - divide the group into three smaller groups
  - allocate a paragraph to each
  - merge the files on one computer.

6. Evaluation *30 mins*

- read the original text if you wish to compare it with your version
- compare this activity with using pen and paper
- what other activities could make use of this computer skill (merging files)?

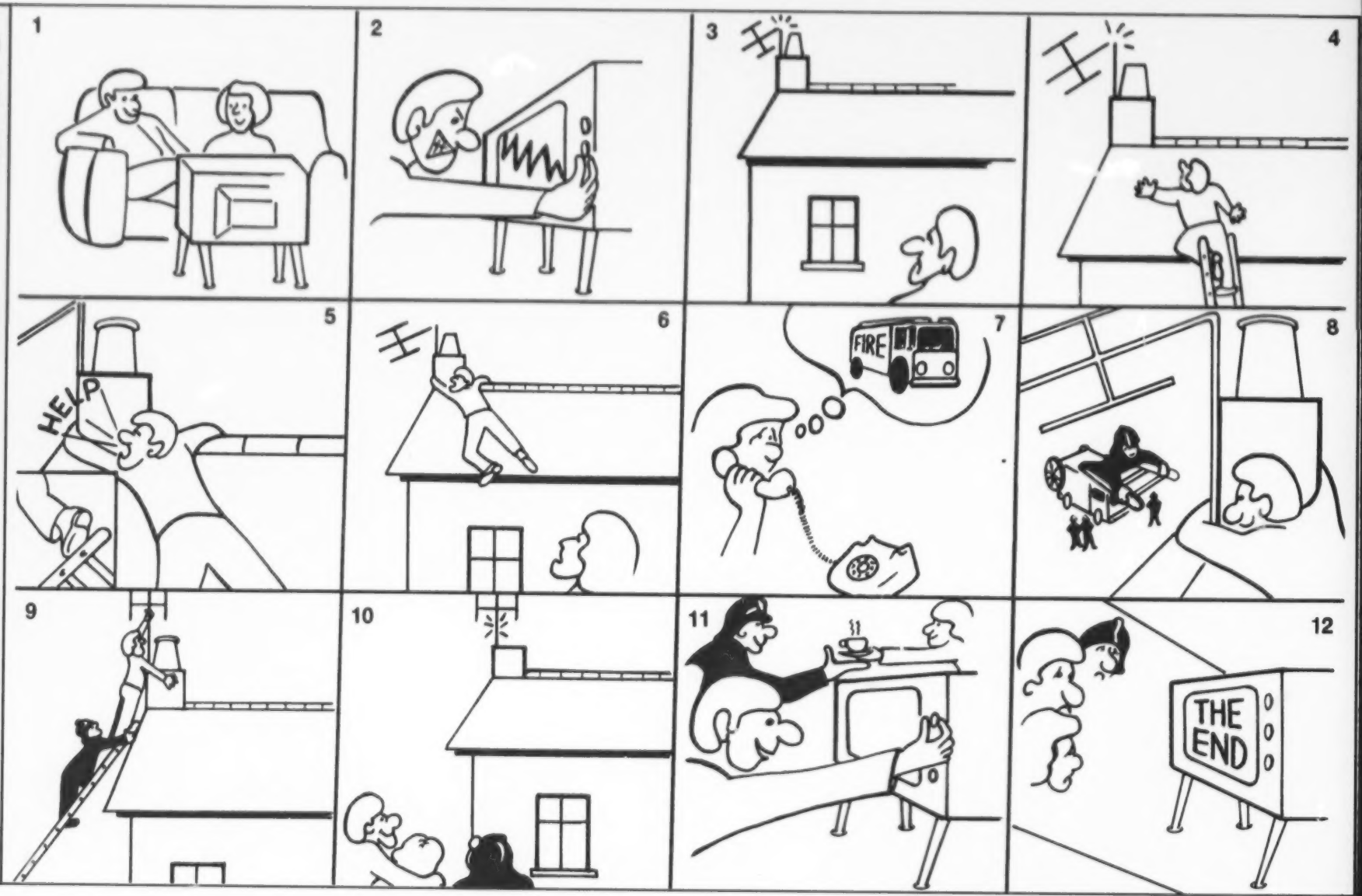
7. Feedback *35 mins*

- compare this activity with using pen and paper:
  - no need to cut, paste and photocopy to get a complete story from three texts
  - easier for three people to see the screen than a piece of paper in front of one student - this facilitates discussion.

- other activities that use this computer skill (merging files)
  - paragraph openers in a particular style which students use in their writing
  - paragraph openers which direct the student towards a particular area of language
  - a booklet on student writing
  - a report of a group activity such as a visit.

8. Lesson Plans

- the sample lesson plans provide further ideas to integrate group writing using the wordprocessor.


1
2
3
4
5
HELP
6
7
FIRE
8
9
10
11
12
THE END

Picture Story

- Look at the picture story.
- Write the story on the wordprocessor using basic language.
- Edit your story by writing the sections for each picture in a different style. Choose from the following:

  advanced descriptive
  detailed narrative
  tabloid newspaper
  broadsheet newspaper
  legalese
  in rhyme
  in the passive
  in the future
  using the conditional
  as instructions
  add dialogue to make it comic strip.

- Think of different ways you could organise this task with groups of students and

  (a) one computer
  (b) two or more computers.

Group Composition

- Your task is to reconstruct a story from the paragraph openers below.
- The first and third paragraphs have been done for you and are on the disk that comes with this pack. The filenames are **para1** and **para3.**
- Without looking at the other paragraphs, write the second paragraph.
- When you have finished, save and close your file.
- Merge the files **para1** and **para3** with your writing (*Sheet* 10).
- Save and print your text.
- Think of other activities you could do with students using merge files.

Who says Southerners are softies when it comes to bad weather?

Arctic conditions were bringing out the beast in the natives.

Chaps in sheepskin jackets and goggles stamped the snow from their boots before ordering doubles.

Sample Lesson Plan 1

Note: this plan is an outline only and does not contain details of non-computer activities.

➤ Aim

To present and practise oral and written use of sentence linkers: before after while.

➤ Objectives

- Note taking
- Listening for information; checking that information
- Collaborative semi-free writing, giving the opportunity to practise before after while

Lesson time	two hours
Previous lesson	listening and notetaking
Next lesson	compound sentences
	free writing from personal history
Preparation	check all computers and printer.

➤ Procedure

20 *mins*	1.	game/other language activity
30 *mins*	2.	present and practise before after while
5 *mins*	3.	set the scene for the listening task
		recap last week: listening for key words
5 *mins*	4.	tutor talks at a natural speed using normal conversational intonation on any subject which is sequential ie. that uses the linkers before after while, such as personal history, life story of famous person, a day's events - students take notes
10 *mins*	5.	students use their notes to check in pairs or informally in group asking questions such as "When did they?" What happened after...?" - tutor confirms key points if necessary
35 *mins*	6.	in groups at computers - write maximum one page on all or part of story
15 *mins*	7.	general feedback, comments, recap, record keeping.

Sample Lesson Plan 2

Note: this plan is an outline only and does not contain details of non-computer activities.

➤ Aim

To practise writing using descriptive language and the comparative.

➤ Objectives

- to consolidate vocabulary and the use of comparative
- to provide a framework for guided writing
- to write a short piece using descriptive language

Lesson time	two hours
Previous lesson	adjectives - describing countries and places (climate, size, culture, etc.) comparatives: bigger than, more interesting than etc.
Next lesson	free writing, describing own town or country
Preparation	check all computers and printer.

➤ Procedure

20 *mins*	1.	game/other language activity
30 *mins*	2.	present and practise negative comparative - not as big as - and question forms - is it as big as...?
25 *mins*	3.	set the scene: A visitor (or tutor) is in the role of a traveller from another planet. Students plan the questions they wish to ask about that planet - questions using the comparative to be included with other general questions. The visitor arrives, students ask questions and take notes as the traveller responds (the speaker either needs a good imagination or to have prepared some ideas)
40 *mins*	4.	in pairs or small groups at the computer, students use their notes to write a comparison of this planet with earth
	5.	print and compare

Note: for independent learners a description of the planet could be prepared on tape.

5 *mins*	6.	general feedback, comments, recap, record keeping.

Original Text

The original text, which is reproduced below, was written by Sue Arnold and published in the Observer.

'It's only a snowfall damn it, not the end of civilisation'

Sue Arnold
In the Soft South

WHO says Southerners are softies when it comes to bad weather? True, they may not have turned up for work on Friday or sent their children to school for the better part of last week.

But all over the Home Counties yesterday desperate housewives set out at dawn in BMWs and Volvo estates determined to reach the supermarkets by first light in order to panic-buy.

'There must have been 50 people waiting outside in the car park when we opened this morning,' said a spokesman for gateway in Bordon, Hampshire. 'By lunchtime we were clean out of tomato soup and the beef and vegetable broth looks like going the same way. Our shelves were empty by 4pm on Friday.'

No trunk route north of Watford could surely match the grim conditions of the M25 battlefield. Hollow-eyed motorists warming their frozen fingers round paper cups of Bovril talked of their ordeal between Gatwick and Heathrow in the safe haven of A3 petrol stations. 'Marcus and I spent five hours trying to get from Paddock Wood to Gatwick,' wept a young woman in orange boots. 'It's too ghastly. We've missed our flight and we were supposed to be skiing in Val d'Isere this weekend.'

Further south at Liphook, which only six months ago claimed record summer temperatures of 105 Fahrenheit, Arctic conditions were bringing out the beast in the natives. 'Will you clear out of my drive and stop asking daft questions about the weather,' shouted a red-faced man brandishing a shovel. He had been digging out the back wheels of his Rover. 'It's only a fall of snow, damn it, not the end of civilisation.'

Shaggy snow stories were rife in the lounge bar of the Old Crown Inn at Chiddingfold, Surrey. 'Bloody wimps,' advised a retired wing commander nursing a brandy and ginger by the fire. 'When I was at school we went sledging in short trousers, none of this mollycoddling. No wonder the country's going to the dogs.'

Chaps in sheepskin jackets and flying goggles stamped the snow from their boots before ordering doubles. 'My God it's hell out there,' said one. 'Nose-to-tail all the way from Goldalming, and Ginny had to go to six shops before she could find a packet of salt.'

Hero of the hour was Merton-born, Wimbledon-educated Prime Minister John Major who elected to drive to Scarborough to address the Young Conservatives, having been advised that he had only a 30 per cent chance of getting there by helicopter. What price southern stamina, eh?

Section Four

➤ Aim

To plan a lesson to introduce or consolidate a language/literacy skill which incorporates the use of a wordprocessor.

➤ Objectives

- to revise terms used in lesson planning, their meaning and relevance
- to produce disk files, lesson notes and instructions
- to evaluate the effectiveness of the wordprocessing activities produced.

➤ Outline of section

- lesson planning - some terms used
- task - planning a lesson incorporating the use of a wordprocessor
- evaluation of materials produced.

➤ Skills checklist

The following computer skills will be practised. It is assumed that you are familiar with the literacy skills listed.

Computer skills

- all from sections 1 - 3.

Language and literacy

- vocabulary - presenting, consolidating.

➤ Materials

In addition to the materials in this book you will need:

- disk file: **lesson**
- instruction sheets for Microsoft Works wordprocessor.

➤ Procedure

The times indicated next to each heading are included as guidance for trainers using these materials to deliver a training course.

1. Introduction *5 mins*

- it is essential that you have completed sections one and two of this course
- read through the introduction to this section to understand the aims and objectives.

2. Task 1 - Lesson Planning terms *30 mins*

- work through task 1: Lesson Planning 1.

3. Evaluation *20 mins*

- what is the aim of this activity?
- how could you use this type of activity with students?
- can the wordprocessor be used to teach as opposed to practise?

4. Feedback

- this activity aims to introduce/revise terms used in lesson planning and to encourage you to consider these points when planning a lesson or programme of work
- this type of exercise could be used with students to consolidate relevant vocabulary
- yes, the wordprocessor can be used to teach, as opposed to practise; new material can be introduced through the wordprocessor.

5. Task 2 *1hr 30mins*

- work through task 2: Lesson Planning 2.

6. Evaluation *35 mins*

- if you have done this task in a group the materials created can be swapped, trialled and discussed
- if you have done this task on your own ask a colleague to look at your materials before trying them out with students.

- consider these points:

  – are the wordprocessing instructions:
    on a separate sheet?
    on the back of a paper tasksheet?
    in a booklet?
    next to the computer?

    All these strategies are possible and you need to work out a model that complements your existing organisation of materials.

  – are the task instructions:
    on a paper tasksheet?
    on screen?
    both of the above?

  – are the answers to exercises:
    on screen below the exercise?
    available on screen in a different file?
    on paper?
    not supplied?

- The points above are organisational. However, practical strategies for the use of the wordprocessor and organisation of support materials will facilitate the integration of IT and basic skills in group or workshop based provision.

Lesson Planning 1

1. Load Works.
2. Open the file **lesson.**
3. Follow the on-screen instructions.
4. When you have finished, save your work with a new name and print.
5. Check your answers with those further down the screen or use the answer sheet.
6. Make any corrections to your text.
7. Add more relevant words and definitions to the list.
8. Think about the following points:
   a) what is the aim of this activity?
   b) how could you use this type of exercise with students?
   c) can the wordprocessor be used to teach, as opposed to practise?

Answers on page 51.

Lesson Planning 2

- Choose target group - level, literacy, ESOL, special needs etc.

- Plan a two hour lesson which incorporates the use of a wordprocessor. Include brief notes for previous and next week's work. You may wish to use a Sample Lesson Plan from Section 3 as a guide.

- Write your notes, materials and instructions for the lesson.

You should have:

a) lesson notes
b) necessary wordprocessing instructions
c) student tasksheet
d) a file on disk (if your lesson needs a prepared file).

- Test the instructions and task.

➤ Vocabulary used in Lesson Planning

Insert a word (or in one case 2 words) for which the following are explanations. Change the word to bold type. The first one is done for you.

1. **Syllabus** - A list of items to be covered during a course. This may be imposed by an external body for certification, or devised by tutors, or negotiated between tutors and students.
2. Sometimes the tutor is this, or a student, or a group of students, or it could be a film. Whichever it is, it needs to change during a lesson.
3. This can vary from quite gentle to megadynamic. If it stays the same throughout a lesson, things can get pretty boring.
4. These are what you hope to achieve by the end of the lesson. They will have been thought out beforehand.
5. These are the steps on the way through a lesson to achieve your aims.
6. These will be clear, appropriate, relevant, attractive, useful, necessary.
7. If you are not responding to these your teaching will not be relevant to students. This is your starting point for everything.
8. It has been said that 15 minutes per one hour's teaching is the average needed for this. If it's done well, the class goes well.

➤ Vocabulary used in Lesson Planning: Answers

1. **Syllabus** - A list of items to be covered during a course. This may be imposed by an external body for certification, or devised by tutors, or negotiated between tutors and students.
2. **Focus** - Sometimes the tutor is this, or a student, or a group of students, or it could be a film. Whichever it is, it needs to change during a lesson.
3. **Pace** - This can vary from quite gentle to megadynamic. If it stays the same throughout a lesson, things can get pretty boring.
4. **Aims** - These are what you hope to achieve by the end of the lesson. They will have been thought out beforehand.
5. **Objectives** - These are the steps on the way through a lesson to achieve your aims.
6. **Materials** - These will be clear, appropriate, relevant, attractive, useful, necessary.
7. **Student Needs** - If you are not responding to these your teaching will not be relevant to students. This is your starting point for everything.
8. **Preparation** - It has been said that 15 minutes per one hour's teaching is the average needed for this. If it's done well, the class goes well.

Further copies are available from:

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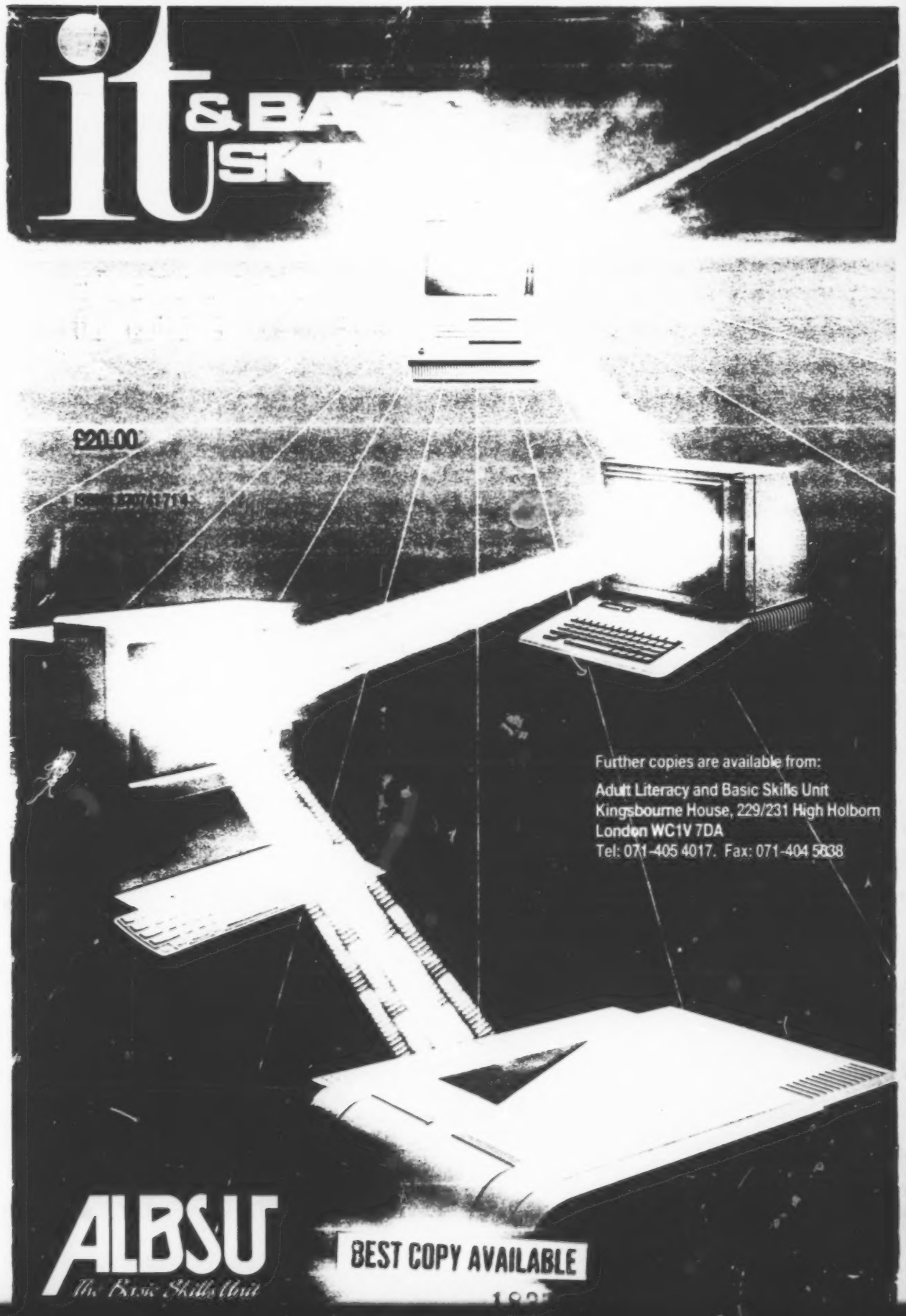

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